

Danmarks Nationalbank

Report and Accounts

1998

Explanation of Symbols

- Magnitude nil
 - 0 Less than one half of unit employed
 - Category not applicable
 - ... Data not available
 - * Provisional or estimated figures
 - Break in series
- Detail may not add because of rounding.

Contents

FOREWORD	11
REPORT OF THE BOARD OF GOVERNORS	
SUMMARY	15
THE DANISH ECONOMY	
International Background	19
Economic Activity in Denmark	21
Balance of Payments.....	26
Denmark's External Debt.....	28
Credit Expansion	30
Wage and Price Trends.....	31
Economic Prospects.....	33
MONETARY AND EXCHANGE-RATE POLICY	
Foreign-Exchange Policy after the Introduction of the Euro	35
The European Monetary System in 1998.....	36
Interest Rates in Denmark	39
Capital Flows and the Foreign-Exchange Reserve	43
The Banks' Liquidity.....	45
The Monetary-Policy Instruments	46
INTERNATIONAL CAPITAL MARKETS	
Interest Rates.....	48
Foreign-Exchange Markets.....	53
Stock Markets.....	57
THE DOMESTIC FINANCIAL SYSTEM	
The Bond Market	59
The Effects of the Whitsun Package on the Capital Market.....	61
Measures in the Stock-Exchange Area.....	62
The Banks	63
The Mortgage-Credit Institutes.....	64
The Investment Associations	66
VB Finans and Himmerlandsbanken	67

BANKNOTES AND COINS	
The New Banknote Series	68
Counterfeiting of Banknotes and Coins	69
Banknotes and Coins in Circulation	70
Reorganisation of the Cash Supply System	71
PAYMENT SYSTEMS	
The Development in the Danish Payment Systems	73
Euro-Denominated Payment Systems in Denmark	74
Internationalisation of the Settlement Structure	77
The Framework for Payment Systems.....	79
INTERNATIONAL MONETARY COOPERATION	
The Introduction of the Euro	81
ERM II	83
The European Central Bank	85
Convergence Criteria and the Stability and Growth Pact	88
Euro Banknotes and Coins.....	89
The International Monetary Fund	90
ORGANISATION	
Changes in Tasks	95
Year 2000 Project	97
The Nationalbank's Management	98
Administration	101
Representation in International Organisations	103
Danmarks Nationalbank's Anniversary Foundation of 1968.....	105
The Nationalbank's Guest Apartments at Nyhavn 18.....	105
The Erik Hoffmeyer Travel Grant Foundation.....	105
PRESENTATION OF THE NATIONALBANK'S ACCOUNTS	
The Nationalbank's Management of Financial Risks	107
Presentation of the Nationalbank's Accounts.....	110
ACCOUNTS	
ACCOUNTS FOR THE YEAR 1998	116

APPENDIX

Press Releases	126
The Independence of the Central Banks and their Integration in the European System of Central Banks	137
The Statutory Basis for the Financial Sector	139
Appendix of Tables	145

Charts

Chart	1	Gross domestic product, GDP	21
	2	Nominal and real effective krone rates	24
	3	Consumer confidence and industrial confidence indicators	26
	4	The balance of payments.....	27
	5	Savings balances.....	27
	6	Development in domestic lending by banks and mortgage-credit institutes.....	30
	7	Wage increases in Denmark and abroad.....	31
	8	Consumer-price increases and underlying inflation	32
	9	Relative domestic demand and balance of payments	33
	10	Selected EMS currencies vis-à-vis the D-mark.....	37
	11	Official interest rates in selected EMS countries.....	38
	12	Long-term yield differentials to Germany.....	39
	13	The Nationalbank's net purchases of currency and the krone rate against the D-mark.....	40
	14	Official interest rates and 3-month Inter-bank interest rate in Denmark	40
	15	The banks' average lending and deposit rates	42
	16	Yield to maturity on 30-year mortgage-credit bonds.....	43
	17	Change in non-residents' holdings of krone-denominated bonds and krone position since the beginning of 1996 ...	45
	18	The banks' accounts with the Nationalbank	46
	19	Yields on 10-year bonds in the USA, Japan, Germany, the UK, Sweden and Norway	49
	20	The 10-year yield differentials of Russia and Brazil to the USA.....	51
	21	Yield differential between mortgage-credit and corporate bonds and government bonds in the USA	52
	22	Dollar vis-à-vis yen and D-mark.....	54
	23	Pound sterling, Swedish krona and Norwegian krone vis-à-vis the D-mark.....	55
	24	Exchange rates of South Korea, Thailand and Mexico vis-à-vis the dollar	55
	25	Exchange rates of Indonesia, Russia and Brazil vis-à-vis the dollar.....	56

Chart 26	Share indices in major industrialised countries	57
27	Share indices in selected emerging markets	58
28	Yield differential between the mortgage-credit bond 6 per cent 2029 and the government bond 7 per cent 2007	60
29	Net new lending for owner-occupied homes and summer cottages	65
30	Assets of investment associations	66

Tables in the text

Table	1	Key figures for the Danish economy.....	22
	2	The Danish labour market.....	25
	3	Denmark's external debt.....	28
	4	Changes in securities portfolios.....	29
	5	Capital flows.....	44
	6	Note circulation.....	70
	7	Circulation, production and withdrawal of coins in 1998 .	71
	8	Central rates and fluctuation bands against the euro in ERM II.....	85
	9	Number of staff, converted into full-time positions.....	101
	10	Sensitivity of the Nationalbank to changes in interest rates.....	108
	11	Currency distribution of the Nationalbank's foreign-exchange positions.....	109

Boxes

Box	1	The Whitsun package of economic measures.....	23
	2	The crisis in the Japanese banking sector.....	50
	3	Hedge funds.....	53
	4	Types of payment systems.....	75
	5	CLS Bank.....	79
	6	The irrevocably fixed conversion rates between the euro and the currencies of the participating EU member states .	82
	7	The ECB's Executive Board, appointed on 1 June 1998	86
	8	EMU decisions 1-3 May 1998.....	89
	9	IMF loans to Russia and Brazil.....	91
	10	The IMF's capital base.....	93
	11	Special Drawing Rights, SDR.....	94
	12	The Board of Directors of Danmarks Nationalbank, 1 March 1999.....	99
	13	The Committee of Directors of Danmarks Nationalbank, 1 March 1999.....	100

Appendix of tables

Table 1	Annual accounts and monthly balance sheets of Danmarks Nationalbank	146
2	Specification of notes in circulation.....	150
3	Specification of coin in circulation.....	150
4	The banks' balances with the Nationalbank	151
5	Money stock	152
6	The Nationalbank's official interest rates.....	153
7	The foreign-exchange reserve.....	154
8	Principal items of the balance of payments (net revenues).....	155
9	Denmark's foreign assets and liabilities	156
10	Denmark's account with the International Monetary Fund.....	157
11	Realignment percentages in the European Monetary System (EMS).....	158
12	Central rates in the European Monetary System (EMS).....	160
13	Intervention rates within the EMS 1979-98.....	162
14	Exchange rates	166

As from 1998 the appendix of tables is reduced to the abovementioned 14 tables. For further information see the *Monthly Financial Statistics*, c.f. the attached list of contents.

Monthly Financial Statistics: Contents	168
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Foreword

Danmarks Nationalbank is the central bank of Denmark. Danmarks Nationalbank was established in 1818 and has been a self-governing institution since 1936.

The legal basis for the Nationalbank's activities is the Nationalbank Act of 1936, according to which the Nationalbank's objective is "to maintain a safe and secure currency system in this country, and to facilitate and regulate the traffic in money and the extension of credit". The Maastricht Treaty stipulates that the central banks of the European Union must be independent in the performance of monetary policy. In March 1998 the European Monetary Institute reviewed the legal basis for the individual central banks. In its *Convergence Report* the EMI states that the Nationalbank fulfils the Treaty's requirements in this respect.

The Nationalbank's function as central bank entails a number of tasks which distinguish the Nationalbank from other banks. Within the framework of the Nationalbank Act, the Foreign-Exchange Act and the Maastricht Treaty the Nationalbank has set out objectives for these tasks.

As an independent and credible institution the Nationalbank's objectives are as follows:

- *to ensure a stable krone rate*
- *to ensure efficient and secure production and distribution of banknotes and coins of high quality*
- *to contribute to efficiency and stability in payment and clearing systems and in the financial markets*
- *to act as banker to the central government*
- *to prepare reliable and relevant financial statistics*
- *to develop and communicate credible standpoints on economic and financial issues with relation to the bank's objectives*
- *to maintain its financial strength by means of consolidation and risk management.*

These objectives serve as the guidelines for the Nationalbank in its day-to-day work.

The Nationalbank has around 570 employees. The Management consists of the Board of Directors, the Committee of Directors and the Board of

Governors. The Board of Directors and the Committee of Directors undertake organisational tasks and approve the annual accounts. The Board of Governors is responsible for the day-to-day management of the Nationalbank and for monetary-policy decisions. The Royal Bank Commissioner is the formal link between the government and the Nationalbank.

The Report of the Board of Governors presents recent trends in the Danish economy, the monetary and foreign-exchange policy and the development in financial markets in Denmark and abroad, together with a review of international monetary cooperation as well as some of the Nationalbank's areas of operation, its organisation and accounts.

In the quarterly Monetary Reviews the Nationalbank publishes articles on recent trends in a number of areas such as monetary policy, statistics, banknotes and coins, Economic and Monetary Union, payment systems, etc.

Report of the Board of Governors

Summary

The third stage of Economic and Monetary Union, EMU, commenced on 1 January 1999 with the introduction of the euro in 11 EU member states. At the same time the European Central Bank, ECB, took over the responsibility for monetary policy in the 11 participating countries. Denmark does not participate in EMU and Danmarks Nationalbank continues to be responsible for monetary policy in Denmark.

The introduction of the euro does not imply any real change in Denmark's foreign-exchange policy. Denmark will continue to pursue the fixed-exchange-rate policy which has been a cornerstone of Danish economic policy since the beginning of the 1980s. The foreign-exchange-policy objective is now to maintain a stable krone rate against the euro.

As a natural continuation of the fixed-exchange-rate policy, in September 1998 Denmark concluded an agreement with the euro area member states and the European Central Bank on participation in the new exchange-rate mechanism, ERM II, which entered into force on 1 January 1999. Denmark participates in ERM II with a central rate against the euro of kr. 746.038 per 100 euro and a fluctuation band of +/- 2.25 per cent. The fluctuation band serves as a safety net, since in practice the Nationalbank stabilises the krone within a narrower band.

As a result of this policy the krone fluctuated little against the D-mark in 1998. The Nationalbank sold foreign exchange in periods when the krone was subject to pressure and purchased foreign exchange in other periods. The net result of the intervention in the foreign-exchange market was a reduction of the foreign-exchange reserve by kr. 29 billion.

The Nationalbank raised its official interest rates when the krone came under pressure in May and September. In the final months of 1998 and in the beginning of 1999 the interest rates were lowered on several occasions in step with the Nationalbank's purchases of foreign exchange. In addition the Nationalbank lowered the interest rates in December 1998 after a coordinated lowering of interest rates in the 11 euro area member states. The differential between short-term

Danish and German interest rates was around 0.5 per cent in February 1999.

In 1998 the international capital markets were affected by the unrest which began in Southeast Asia in 1997 and intensified when Russia in August 1998 suspended payments on its debt and ceased to peg the rouble to the dollar. This entailed considerable demand for safe and liquid government bonds issued by the major industrialised countries, leading to a significant drop in long-term interest rates. During the year long-term yields in the USA and Germany fell by 1.1 per cent and 1.4 per cent respectively. The yield differential vis-à-vis Germany of the previous high-interest countries Spain, Portugal and Italy narrowed in 1998 as the introduction of the euro drew closer. In February 1999 Denmark's yield differential to Germany was 0.4 per cent.

Growth in the gross domestic product, GDP, of Denmark's trading-partner countries is estimated at 2.6 per cent in 1998. The effects of the economic crises in Russia and Southeast Asia on the economies of the USA and the euro area in 1998 were only moderate.

The economic upswing which has characterised the Danish economy since 1993 continued in 1998. Preliminary statistics indicate GDP growth of 2.8 per cent in 1998. Unemployment has fallen and inflation is still low, but the balance problems in the economy are now more serious than before.

In 1998 the current account of the balance of payments showed a deficit for the first time since 1989. The marked deterioration in the balance of payments is due primarily to the strong drop in the trade surplus. Market shares on both domestic and export markets were eroded in the face of strong growth in costs and high capacity utilisation. Agricultural exports in 1998 were affected by low prices, and the labour-market dispute in the spring of 1998 also reduced exports.

Interest payments on Denmark's large external debt are substantial, making Denmark exposed in the event of unrest on capital markets. To ensure future scope for manoeuvre in economic policy it is crucial that the external debt be eliminated within a reasonable period.

In 1998 wages increased by 4.4 per cent, against 4.0 per cent in 1997. Denmark's wage increases were thus considerably higher than in the euro area. If Denmark is to retain its competitiveness vis-à-vis the euro

area the scope for wage increases in coming years is limited. Unemployment continued to fall in 1998, reaching 6 per cent at the close of the year. This is the lowest level since 1980. Unemployment in Denmark is considerably lower than in the euro area.

Industrial and consumer-confidence indicators for the end of 1998 and the first months of 1999 show signs of a dampening of the Danish economy. As a consequence of the crises in Russia and Southeast Asia growth in our trading-partner countries is expected to decline. In order to achieve a sound current-account surplus domestic demand in Denmark must for a period show lower growth than abroad, irrespective of any weakening in activity abroad.

The objective of Denmark's monetary policy is to stabilise the krone, while it is up to fiscal policy to stabilise wages and prices. Since 1995 the monetary factors have had a clearly expansive effect on the domestic economy. This increases the demands of a tight fiscal-policy stance. The planned tightening of fiscal policy for 1998 does not appear to have been realised. The trend of recent years for fiscal-policy tightenings to be less effective than set out in the Finance Act thus continues. This makes it all the more imperative that the adopted fiscal tightening in 1999 is achieved and is maintained in 2000.

In 1998 government finances showed a surplus for the 2nd consecutive year. Government finances are estimated to have improved from a surplus of kr. 1 billion in 1997 to a surplus of kr. 11 billion in 1998. This reflects the automatic effects of the cyclical upswing, which should be utilised to ensure further consolidation.

The banks' total profit for the year rose to kr. 14 billion. Losses and provisions on debtors increased moderately. Estimates show that for the 4th consecutive year the mortgage-credit institutes achieved a favourable annual result.

In May 1998 the Nationalbank issued a new 1,000-krone note. A new 50-krone note is issued on 7 May 1999. The last in the new series of banknotes will be the new 100-krone note at the end of 1999. Four cash depots were established in Greater Copenhagen in 1998.

The common European payment system, TARGET, entered into force on 1 January 1999. TARGET is designed to ensure rapid and secure transfer of large euro-denominated payments.

In 1998 Danmarks Nationalbank opened an Information Desk, and established a website on the Internet. This gives easier access to statistics and information on the Nationalbank.

Since 1997 the Nationalbank has prepared its systems for the new millennium. The Year 2000 Project comprises review and testing of computer systems and computer hardware, as well as installations and infrastructure. The project is expected to be completed according to plan well before the millennium change.

The Nationalbank's accounts for 1998 show a profit of kr. 5.4 billion. An amount of kr. 1.0 billion – corresponding to the value adjustments – is allocated to the Value Adjustment Reserve, and kr. 1.3 billion – equivalent to 30 per cent of the profit before value adjustments – to the General Reserves. The remainder of kr. 3.1 billion is payable to the central government.

The Danish Economy

The strong growth in the Danish economy since the autumn of 1993 continued into 1998 with rising employment and high capacity utilisation. Meanwhile the balance problems in the economy have become more serious. Recent years' deterioration in the balance of payments escalated in 1998 and for the year as a whole there was a deficit of kr. 16 billion. This is the first current-account deficit since 1989. In addition, capacity problems have led to wage increases considerably in excess of those seen abroad.

At the close of the year industrial and consumer-confidence indicators show that the pressure on the economy is subsiding and that Danish growth is gearing down. A clear cyclical dampening and a period of lower growth than abroad in consumption and investments, irrespective of any weakening in activity abroad, are prerequisites for regaining competitiveness and achieving a sound current-account surplus.

INTERNATIONAL BACKGROUND

Growth in the gross domestic product, GDP, of Denmark's trading-partner countries is estimated at 2.6 per cent in 1998. This is close to the growth rate in 1997. In those countries domestic demand rose by 3.0 per cent in 1998, against 2.2 per cent in 1997. The effects of the economic crises in Russia and Southeast Asia on the economies of the USA and the euro area in 1998 were only moderate. The effect may become stronger in 1999, however, and the OECD's latest forecast predicts declining growth in Denmark's trading-partner countries in 1999.

The sustained cyclical upswing in the USA entered its 7th year. This is the longest uninterrupted boom in the USA since World War II. Preliminary statistics indicate that GDP rose by 3.9 per cent in 1998. Growth was driven primarily by private consumption, which was stimulated by low unemployment. Low savings, together with substantial investments, led to a growing current-account deficit. Although the boom in the USA has been characterised by low inflation, the rate of increase in hourly wage costs is beginning to pick up.

Since 1992 *Japan* has faced a serious recession, interrupted only by a short period of growth in 1996. The recession is aggravated by the financial crisis in Southeast Asia. Preliminary statistics show a drop in real

output of 2.6 per cent in 1998, while during the year unemployment rose from 3.5 per cent to 4.3 per cent. Especially domestic demand was weak, despite falling bond yields over the year to a historic low of less than 1 per cent in the autumn of 1998. The Japanese crisis can be attributed among other things to a financial sector burdened by defaulting loans and facing major solvency problems, cf. Box 2. As a result of the crisis a reconstruction plan for the financial sector was adopted, together with measures to ease fiscal policy.

For the *euro area* as a whole the economic upswing was increasingly driven by consumption and investments. According to the preliminary statistics real output grew by close to 3 per cent in 1998. Inflation was still subdued, with an increase in the Harmonised Index of Consumer Prices (HICP) of around 1 per cent against 1997. The rate of wage increases was about 2 per cent in 1998.

In *Germany* GDP growth was approximately 2.6 per cent in 1998, against 2.3 per cent in 1997. Domestic demand was the primary factor for growth, including considerable stockbuilding. Unemployment fell to 10.7 per cent at year-end from 11.7 per cent at end-1997. This was primarily a consequence of job-creation measures. Wage increases in Germany have been moderate in recent years. The annual rate of increase was just over 1 per cent in the 3rd quarter of 1998. At the end of the year the rate of increase in consumer prices was approximately 0.5 per cent, the lowest level for more than 10 years.

Preliminary statistics for *France* indicate growth of 3.1 per cent in 1998, compared to 2.3 per cent in 1997. Growth was driven primarily by private consumption.

In recent years *Finland* has achieved one of the strongest growth rates in the euro area and GDP growth for 1998 is estimated at around 5 per cent.

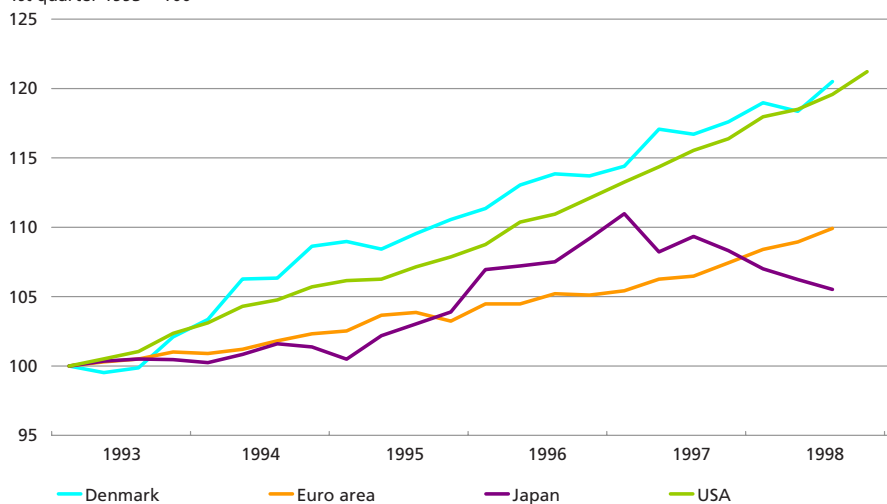
After a number of high-growth years in the *UK* the picture has changed and consumer and industrial confidence is weak. The preliminary statistics for 1998 indicate an increase in output of 2.7 per cent after 3.5 per cent in 1997. The growth in 1998 can be attributed to consumption and investments, while exports were hit by rising costs and sterling's strength, although the currency weakened during the year.

GDP growth in *Sweden* is estimated at just below 3 per cent in 1998. Unemployment fell to 6.5 per cent from 8.0 per cent in 1997. This improvement is mainly attributable to domestic demand, although exports also contributed, as a consequence of the weak Swedish krona. In 1998 Swedish inflation was moderate.

GROSS DOMESTIC PRODUCT, GDP

Chart 1

1st quarter 1993 = 100



Note: Constant prices, seasonally adjusted.

Source: National statistics and own calculations.

Growth in *Norway* has been high for some years. The main factor is a surge in domestic demand. There have been signs of overheating of the economy, creating a risk of higher inflation. In 1998 *Norway* was affected by falling oil prices and the balance of payments deteriorated significantly.

Russia was burdened by serious financial and real-economic problems in 1998. Output fell and export earnings declined. Low oil prices were one of the factors involved. Inflation in *Russia* was considerable.

ECONOMIC ACTIVITY IN DENMARK

The strong upswing in activity which has characterised the Danish economy since the autumn of 1993 continued into 1998 with high capacity utilisation and falling unemployment.

Preliminary statistics indicate an increase in Danish GDP of 2.8 per cent in 1998. The primary growth factor is domestic demand, which rose by 4.2 per cent overall. Stockbuilding accounts for a considerable proportion, cf. Table 1.

Private consumption increased by 3.1 per cent and the savings ratio fell. At the same time business investments rose strongly. The total savings deficit of the private sector was 2.4 per cent of GDP, compared to a small surplus in 1997.

KEY FIGURES FOR THE DANISH ECONOMY					Table 1
Real growth against the previous year, per cent	1994	1995	1996	1997	1998
Private consumption	7.1	3.3	2.7	3.6	3.1
Government demand	3.2	2.3	3.7	1.3	1.7
Business investments	7.2	15.9	4.1	12.0	9.2
Residential investments	8.1	3.2	5.0	8.8	1.3
Domestic demand, excluding stockbuilding	6.0	4.8	3.3	4.4	3.6
Stockbuilding ¹⁾	1.1	0.1	0.0	0.1	0.5
Domestic demand, total.....	7.2	4.8	3.3	4.5	4.2
Exports.....	8.2	4.4	3.7	5.5	0.2
Imports	13.2	9.9	3.7	9.8	3.7
Net exports ¹⁾	- 1.0	- 1.6	0.1	- 1.3	- 1.3
Gross domestic product, GDP	5.8	3.0	3.3	3.1	2.8
Unemployment, per cent of the labour force	12.2	10.3	8.7	7.8	6.5
Consumer-price index, percentage growth..	2.0	2.1	2.1	2.2	1.9
Current account, per cent of GDP	1.8	1.0	1.7	0.5	- 1.4
General-government balance, per cent of GDP	- 2.4	- 2.3	- 1.0	0.1	1.0
Private savings surplus ²⁾ , per cent of GDP	4.2	3.3	2.7	0.4	- 2.4

Source: 1994-97: Statistics Denmark. 1998: Partial estimate, based on preliminary statistics from Statistics Denmark.

¹⁾ Contribution to growth in GDP at constant prices.

²⁾ Current-account surplus plus government-budget deficit.

In view of the growth in private consumption the Folketing (Parliament) on 26 June 1998 adopted the Whitsun package of fiscal-tightening measures, cf. Box 1. The purpose was to stimulate private savings by e.g. reducing the tax deductibility of interest payments in order to dampen rising prices for owner-occupied homes, which have a great impact on private consumption. Most of the Whitsun-package measures do not take effect until 1999. In 1998 the package's dampening effect on property prices was offset by falling interest rates. Although statistics for prices for one-family homes up to the 4th quarter do not indicate any slowdown in the growth rate, sales have stagnated.

Preliminary statistics point to a neutral fiscal policy for 1998 with a fiscal effect of -0.1 per cent of GDP. This is clearly less tight than the -0.5 per cent planned when the Finance Act was adopted. In recent years it has generally been difficult to maintain the planned degree of tightness in government finances, and public consumption has grown more than laid down in the Finance Act and in local-government budgets. This makes it all the more important that the adopted fiscal tightening in 1999 is achieved and is maintained in 2000.

The objective of Denmark's monetary policy is to stabilise the krone, and the effects on the economy of monetary conditions therefore to a

THE WHITSUN PACKAGE OF ECONOMIC MEASURES

Box 1

The Whitsun package entails adjustments to both corporate and personal taxation. The amendments will enter into force gradually up to 2002.

Personal taxes

- The tax deductibility of interest payments is lowered gradually from 46.4 per cent in 1998 to 32.6 per cent in 2002.
- The base tax rate is lowered gradually from 8 per cent in 1998 to 5.5 per cent in 2002.
- The maximum marginal tax rate is raised from 58 per cent to 59 per cent.
- The basic deduction on calculation of intermediate tax is raised by kr. 32,000.
- The deductibility of transport expenses is raised for taxpayers in low-income brackets.
- The tax rates for company cars are raised.

Property taxes

- The tax on imputed rent of owner-occupied homes is replaced by a local-government tax of 1 per cent of the property value, but 3 per cent of the proportion exceeding kr. 2,150,000.

Pensions

- The temporary extra contribution to the ATP (Danish Labour Market Supplementary Pension Fund) pension savings scheme becomes permanent.
- The real-interest tax is converted to a tax rate of 26 per cent on returns.
- A tax on equity returns of 5 per cent is introduced and the ceiling for equity investments is raised to 50 per cent.

Other measures

- A number of energy taxes are raised.
- VAT credit periods are amended and depreciation rules adjusted.

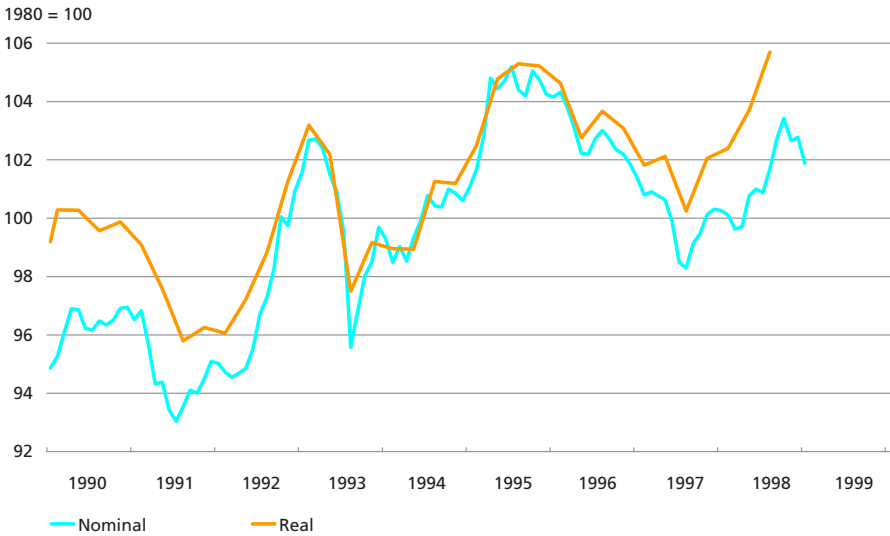
great extent stem from abroad. Since 1995 monetary factors as a whole have had a clear expansive effect on the domestic economy, among other things due to the international drop in long-term yields. This makes a tight fiscal policy all the more imperative.

Total exports of goods and services stagnated in 1998. In volume terms they were unchanged from the 1997 level. The dampening of exports must be viewed in the light of the deterioration in competitiveness. An additional factor was the labour-market dispute in April and May, which generally blurs the economic indicators. In volume terms imports increased by 3.7 per cent and domestic market shares were lost.

Throughout the cyclical upswing Danish manufactured exports have grown at a slower rate than exports from competing countries. Since

NOMINAL AND REAL EFFECTIVE KRONE RATES

Chart 2



Note: Real effective krone rate based on hourly earnings in manufacturing industry. The real effective krone rate denotes the development in Danish wages compared to abroad in a common currency.
Source: Statistics Denmark, OECD, the Danish Employers' Confederation and own calculations.

1993 Denmark has lost market shares. Denmark's competitiveness deteriorated as a result of higher wage increases than in competing countries and an increase in the effective krone rate. Moreover, the Danish economy was characterised by high capacity utilisation and exports have thus generally lagged behind the trends in export markets.

The Danish krone strengthened in both nominal and real terms in 1998, cf. Chart 2. At the close of the year the nominal effective krone rate was approximately 2 per cent higher than at end-1997. This is mainly attributable to the development in the Swedish krona, the dollar and the pound sterling. A stronger increase was seen in the real exchange rate based on an hourly wage index for manufacturing industry, which illustrates Danish wage growth compared to abroad in a common currency. This reflects more vigorous wage growth in Denmark than abroad.

Total employment rose by around 60,000 in 1998. This matches the increase in 1997, cf. Table 2. Employment in the private sector improved by 50,000, while public-sector employment increased by 10,000, including service-related jobs at local-government level.

Unemployment has fallen substantially in recent years, to the lowest level since 1980. Recorded seasonally-adjusted unemployment was 6 per

THE DANISH LABOUR MARKET				Table 2
1,000 persons, annual average	1995	1996	1997	1998
Wage and salary earners				
Private sector	1,567	1,587	1,630	1,680
Public sector	771	786	800	810
Self-employed	217	215	213	212
Total in employment	2,555	2,588	2,643	2,702
Unemployed	288	246	220	182
Recipients of early-retirement benefit ¹⁾	138	167	170	177
Recipients of leave benefits	78	63	46	41
Labour force, gross	3,059	3,063	3,078	3,102
Unemployment, per cent of the labour force	10.3	8.7	7.8	6.5
Unemployment, EU definition, per cent of the labour force ²⁾	7.2	6.8	5.6	5.1

Source: Statistics Denmark, the Directorate General for Employment Placement and Vocational Training and own calculations.

¹⁾ Including recipients of transitional allowance.

²⁾ Compiled by Eurostat.

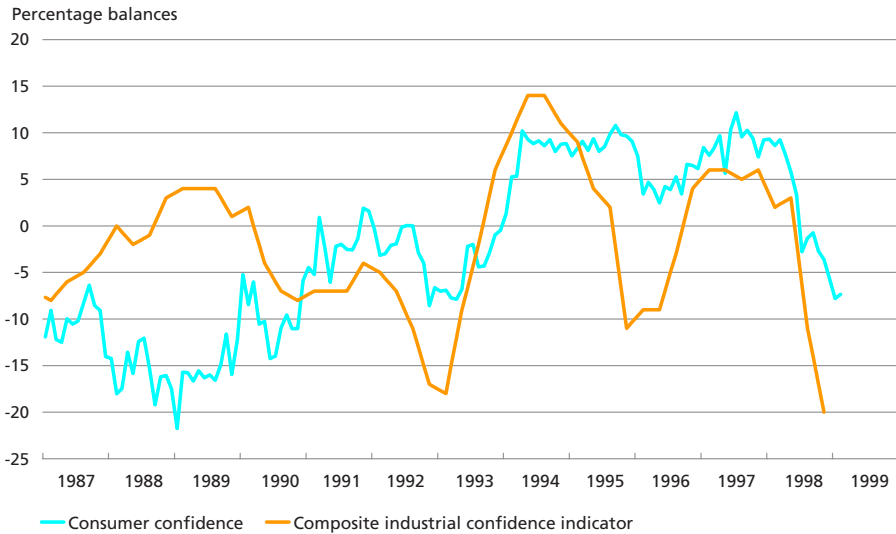
cent at year-end, while unemployment compiled by Eurostat according to international guidelines was 4.6 per cent. In contrast to the statistics of Statistics Denmark, Eurostat's statistics are e.g. based on the number of people available for and actively seeking employment. For comparison, the Eurostat statistics show a rate of unemployment of 10.8 per cent in the euro area.

A precondition for sustained growth in employment without accelerating wages is a growing supply of labour. As an element of the Finance Act agreement for 1999 the Folketing (Parliament) adopted a package of labour-market reforms. It includes a reduction of the period of entitlement to unemployment benefit from 5 to 4 years, a tightening of the rules on availability for work, and enhanced activation measures. Moreover, the rules of the early-retirement scheme were changed in order to raise the average age of retirement.

Economic indicators show that towards the end of the year particularly activity in the manufacturing industry was dampened. Capacity utilisation and new orders received from both domestic and export markets declined, while sales of manufactures stagnated.

The industrial confidence indicator averages businesses' assessment of output expectations, order books and stocks of finished goods. Chart 3 shows that industrial confidence decreased significantly in the 2nd half-year and was exceptionally low at year-end.

Consumer confidence also declined in the 2nd half-year and at end-1998 was at the same low level as before the upswing began in



Note: Seasonally adjusted. The composite confidence indicator reflects business enterprises' expectations of the following three months. The indicator includes data on output expectations, overall order books and stocks of finished products.
 Source: Statistics Denmark.

1993, cf. Chart 3. Falling consumer confidence was particularly affected by the evaluation of the economy in general. However, retail sales and car sales still show high growth and no dampening of consumption is indicated.

The decline in these indicators must be viewed in the light of the tougher conditions for exports and the Whitsun package of economic measures. This may be a forewarning of a slowdown in economic activity in 1999, although it is uncertain whether the intended dampening of domestic demand will be achieved.

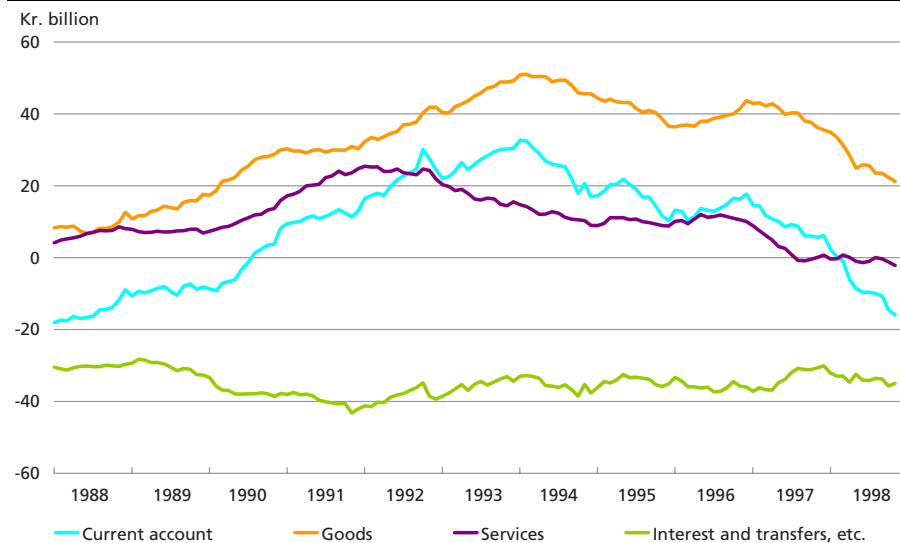
BALANCE OF PAYMENTS

In 1998 the current account of the balance of payments showed a deficit. This is the first current-account deficit since 1989 and amounted to kr. 16 billion according to preliminary statistics. Since the cyclical upswing began in 1993 a surplus of around kr. 30 billion has thus been replaced by a considerable deficit. This reflects stronger growth in domestic demand than in output during this period.

The substantial deterioration in the balance of payments in 1998 is related primarily to a strong decline in the trade surplus, cf. Chart 4. Stagnating exports were unable to keep up with rising imports since

THE BALANCE OF PAYMENTS

Chart 4



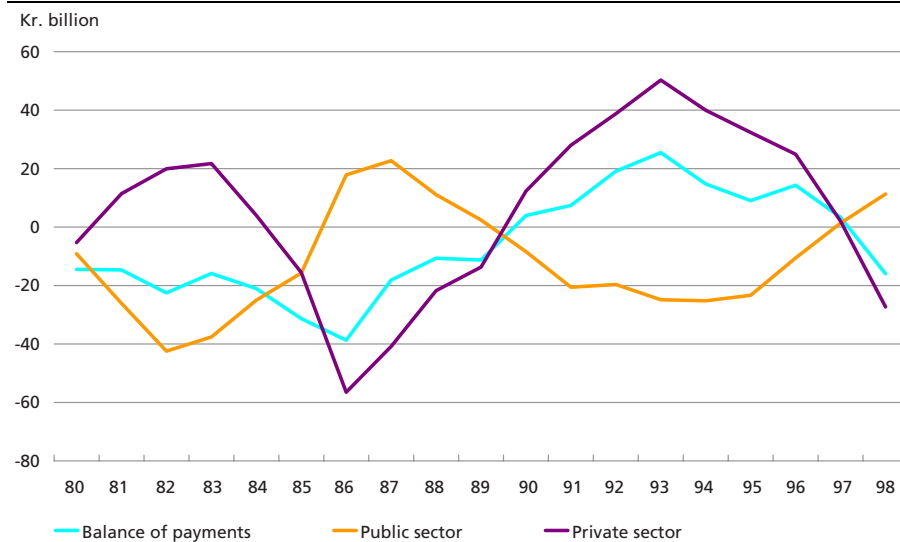
Note: 12-month moving sum.
Source: Statistics Denmark.

capacity pressure in the economy increased the propensity to import, while the propensity to export diminished.

A number of extraordinary factors contributed to the deterioration in the trade balance and current account in 1998. Agricultural exports were

SAVINGS BALANCES

Chart 5



Note: For 1998 an estimate has been used.
Source: Statistics Denmark, Ministry of Economic Affairs and own calculations.

affected by low pork prices, while exports declined as a consequence of the labour-market dispute.

The deterioration in the balance of payments in 1998 was offset particularly by an increasing deficit on private savings amounting to kr. 27 billion in 1998, according to preliminary statistics, against a surplus of kr. 2 billion in 1997. This deterioration was far stronger than the improvement in government finances from a surplus of kr. 1 billion in 1997 to a surplus of kr. 11 billion in 1998, cf. Chart 5. This reflects the automatic effects of the upswing.

To ensure future scope for manoeuvre in economic policy it is crucial that the foreign debt be eliminated within a reasonable period, particularly in the light of the demographically-induced changes in the provider burden as a consequence of the ageing of the population in coming years. It is thus important to pursue a sufficiently tight fiscal policy which ensures a balanced economic course and the required degree of consolidation.

DENMARK'S EXTERNAL DEBT

Preliminary calculations show that Denmark's external debt rose by kr. 12 billion to kr. 280 billion in 1998. The increase is attributable to the current-account deficit in 1998.

The compilation of Denmark's external debt at the end of 1998 is based on the balance at end-1997, to which the current-account deficit in 1998 is added, and adjustment is made for recorded and calculated value changes in Denmark's external assets and liabilities. Preliminary statistics indicate a current-account deficit of kr. 16 billion. Value adjustments are estimated to reduce the net debt by kr. 4 billion.

In 1998 the foreign-exchange reserve decreased by kr. 29 billion, cf. Table 3, due to the Nationalbank's sale of foreign exchange in periods when the krone was under pressure.

DENMARK'S EXTERNAL DEBT

Table 3

Kr. billion	Assets	Liabilities	Net liabilities	Net liabilities
	End-1998			End-1997
The Nationalbank	103	1	-101	-130
Central government	13	384	371	385
Other government sector	28	14	-14	-8
Banks	497	433	-64	-68
Remaining private sector	587	675	88	89
Total	1,228	1,508	280	268

Source: The compilations are calculated on the basis of the payments statistics and value adjustments.

CHANGES IN SECURITIES PORTFOLIOS

Table 4

Kr. billion	End-1997	Net purchases	Value adjustment	End-1998
Residents' holdings of foreign securities ¹⁾				
Bonds	106	22	4	132
Shares	150	31	24	205
Non-residents' holdings of Danish securities:				
Bonds	589	14	19	622
Shares	130	-15	5	120

Source: The Danish Securities Centre's statistics, payments statistics and recorded and calculated value adjustments.

¹⁾ Excluding the Nationalbank's holdings of foreign securities.

The central government's debt to non-residents fell by kr. 14 billion during 1998 since the proceeds from the sale of shares in Tele Danmark to abroad were used to reduce the central government's foreign debt. Moreover, non-residents sold back Danish government bonds denominated in kroner.

Contrary to their resale of Danish government bonds in 1998, non-residents bought Danish mortgage-credit bonds. Yields on government bonds fell in 1998, and the yield differential to Germany narrowed. At the same time the yield differential between mortgage-credit and government bonds widened.

In 1998 residents purchased foreign bonds for kr. 22 billion. This continues the tendency of previous years for growing domestic portfolios of foreign bonds.

Since 1995 the holdings of foreign shares of Danish business enterprises, institutions and households have more than trebled. In 1998 net purchases of foreign shares were a record-high kr. 31 billion, to which capital gains of kr. 24 billion should be added. Capital gains arise because residents primarily hold shares issued by US and western European businesses, for which market prices rose in 1998.

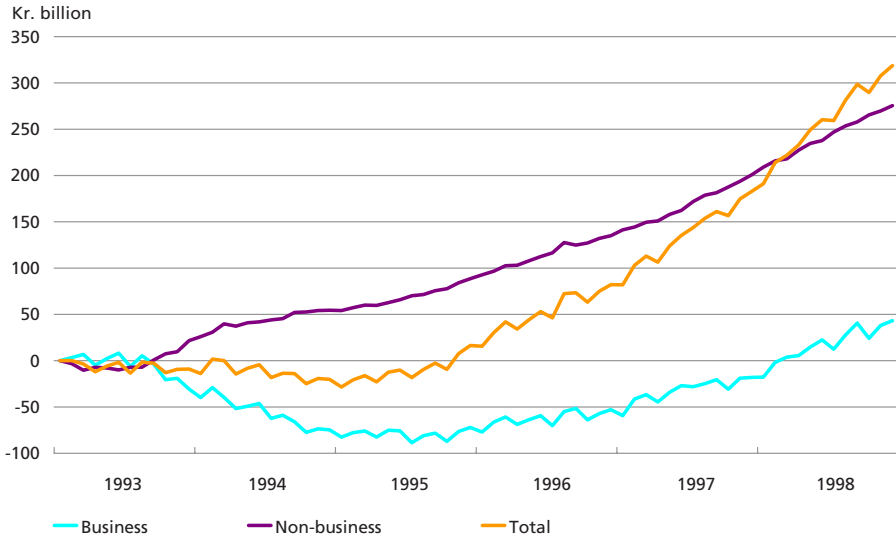
Non-residents' holdings of Danish shares also increased in 1996 and 1997. This trend was reversed in 1998 when non-residents resold Danish shares for kr. 15 billion.

Table 9 of the Appendix of Tables states assets and liabilities in 1991-98 distributed on key sectors.

The Nationalbank has implemented a survey of the accounts with non-residents at end-1998 of approximately 2,000 Danish business enterprises and institutions. A corresponding survey was carried out for 1996. On the basis of the survey results revisions of the preliminary compilation of the external debt at end-1997 and end-1998 can be expected. The survey results will be published in the autumn of 1999.

DEVELOPMENT IN DOMESTIC LENDING BY BANKS AND MORTGAGE-CREDIT INSTITUTES

Chart 6



Note: Kroner and foreign currency. Adjusted for losses and provisions. Accumulated since January 1993.

CREDIT EXPANSION

The considerable decrease in the private savings balance is offset by an increase in lending by banks and mortgage-credit institutes, cf. Chart 6.

The banks' total domestic lending at end-1998 exceeded the end-1997 level by kr. 57 billion, which is an increase of 14 per cent. Business lending accounted for kr. 45 billion. The banks' business lending normally matches the business cycle, but with a considerable time lag. At the beginning of an upswing business enterprises have unutilised capacity and conditions for own financing are favourable. Debt financing is not required until later, when capacity utilisation is higher.

At end-1998 lending by the mortgage-credit institutes was kr. 79 billion higher than one year before, an increase of 8 per cent. Lending for owner-occupied homes accounted for kr. 57 billion. Business lending rose by kr. 16 billion, while lending for subsidised construction and to the public sector increased by kr. 6 billion.

The money stock, which consists of deposits with the banks, as well as banknotes and coins, rose by 4.6 per cent in 1998. This is in line with the increase in the transaction requirement measured by the value of domestic demand.

WAGE AND PRICE TRENDS

During 1998 wages in Denmark accelerated. Hourly earnings rose by 4.4 per cent from 1997 to 1998, against 4.0 per cent for the preceding period, according to the wage statistics compiled by the Danish Employers' Confederation (DA).

This wage growth reflects the tight Danish labour market. Several sectors report a shortage of labour, e.g. in building and construction where wage increases were 5.0 per cent in 1998.

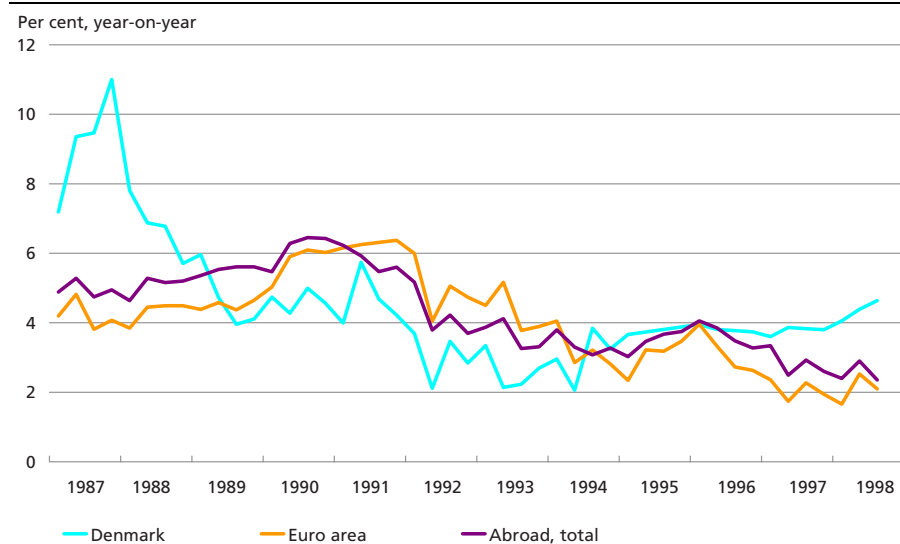
During the collective negotiations in the spring of 1998 wage earners rejected the official conciliation proposal. This released a labour market dispute with effect from 27 April 1998. The dispute ended with legislative intervention on 7 May 1998. The settlement upheld the employers' cost ceiling from the rejected conciliation proposal, but reduced the increase in pension contributions in favour of extra days of leave.

Wage increases in Denmark are significantly higher than abroad's, cf. Chart 7, and Denmark's wage competitiveness has deteriorated. If Denmark is to retain its competitiveness, Danish wage costs must not in the long term exceed wages in the euro area. This leaves limited scope for wage increases in the coming years.

In view of current harmonised unemployment rates of respectively 4.6 and 10.8 per cent in Denmark and the euro area, the Danish labour

WAGE INCREASES IN DENMARK AND ABROAD

Chart 7



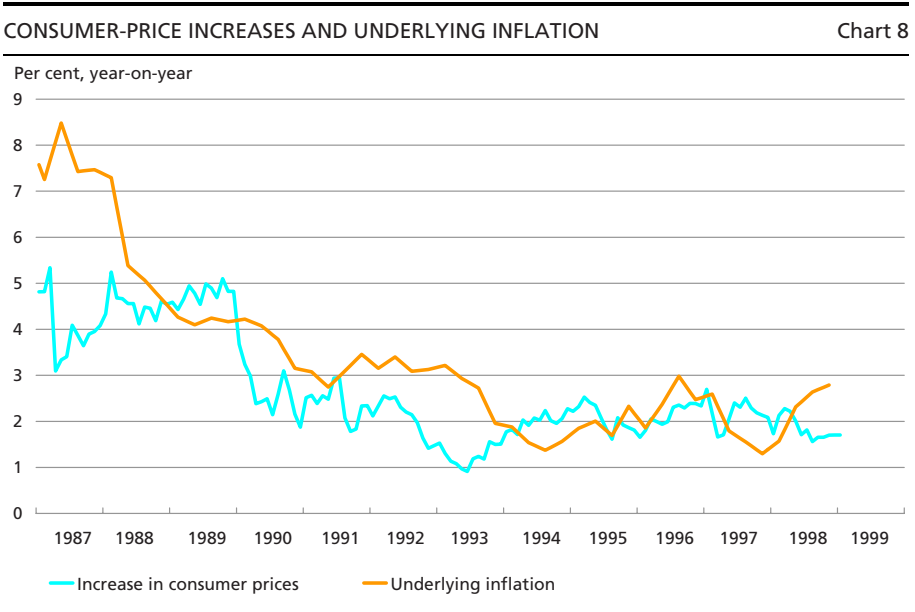
Note: Abroad, total is the countries included in the effective-krone-rate index. The wage increases are weighted together using the weights of the index.

Source: OECD, Statistics Denmark and own calculations.

market will be tighter than that of the euro area for some time to come, however. This emphasises the need for wage restraint in Denmark. A dampening of domestic activity compared to abroad would reduce the tendency for excessive wage increases in Denmark.

Growth in consumer prices continues to be moderate, cf. Chart 8. Inflation in Denmark measured by the year-on-year rate of increase in consumer prices was 1.9 per cent in 1998, compared to 2.2 per cent in 1997. The HICP inflation rate was 1.3 per cent. This is in line with inflation in the euro area. Inflation is kept down by weak growth in energy, import and food prices. On the other hand underlying inflation, which is a measure of domestic market-determined price increases, rose during the year. One cause was the accelerating wage increases.

Current wage and price trends continue to push up real wages, which also exceed real wage increases abroad, especially in the euro area. There are significant variations in earnings trends in the various sectors and between wage earners and the self-employed, however. Employees in building and construction and in the computer and IT sector enjoy particularly high wage increases, whereas the agricultural sector is under pressure.



Note: Underlying inflation reflects the domestic market-determined inflation. Underlying inflation has a high content of services and will therefore normally exceed the increase in consumer prices.
Source: Statistics Denmark and own calculations.

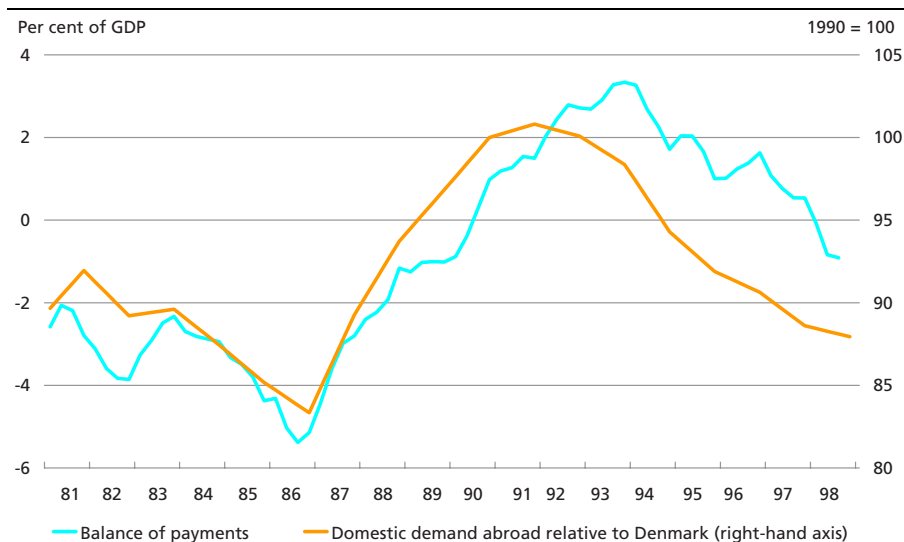
ECONOMIC PROSPECTS

In 1998 Denmark's foreign debt rose by kr. 12 billion to kr. 280 billion and accounts for approximately 25 per cent of GDP. Interest payments on the debt absorb a considerable proportion of total revenue in the economy and the foreign debt makes Denmark exposed in the event of unrest on capital markets. It is therefore important to reduce the debt within the foreseeable future, particularly because the age profile of the population will shift in coming years and the proportion in employable age groups will decline. This is equivalent to saving up to meet the obligations this imposes.

After several years of high economic growth, at the end of 1998 a number of economic indicators point to a dampening of the economy. A slowdown compared to abroad may reduce the balance problems in the economy and improve the balance of payments, cf. Chart 9. However, a prerequisite for restoring a sound current-account surplus is a prolonged period of lower growth in domestic demand in Denmark than abroad. This for example requires a definite dampening of private consumption, which accounts for around half of domestic demand.

The political measures taken are intended to have this effect, but the exact dampening effect on prices for owner-occupied homes and the impact on the private consumption ratio are as yet unknown. Further-

RELATIVE DOMESTIC DEMAND AND BALANCE OF PAYMENTS Chart 9



Note: The balance of payments is a 12-month moving average. Domestic demand abroad is weighted together using the weights of the effective-krone-rate index.

Source: OECD, Statistics Denmark and own calculations.

more, the drop in interest rates throughout 1998 may refuel consumption. To achieve an increase in the savings ratio a further tightening of economic policy may be necessary. In the current situation where capacity utilisation is still generally high a tighter fiscal policy can restore balance to the economy without any major effects on employment, since available capacity can be used to regain export market shares.

Another risk element is a dampening of growth abroad. This might make it difficult for Denmark to achieve sufficient improvement in the balance of payments. According to the OECD's latest forecast growth is expected to slow down in 1999 and domestic demand in Denmark's trading-partner countries is expected to rise by 2.1 per cent in 1999, against 3.0 per cent in 1998.

In order to achieve a balanced course in Denmark pressure on capacity must be reduced. For a number of years the Danish labour market will probably be tighter than in the euro area, but to retain competitiveness higher wage-increase rates in Denmark must be avoided. Otherwise there is a risk of a repetition of the abrupt end to the boom in 1986-1987.

Monetary and Exchange-Rate Policy

The introduction of the euro as from 1 January 1999 will not imply any real change in Denmark's foreign-exchange policy. The fixed-exchange-rate policy will be maintained, but the objective will now be to maintain a stable krone rate against the euro, within the framework of the new exchange-rate mechanism, ERM II.

The krone fluctuated little against the D-mark in 1998. The Nationalbank sold foreign exchange in periods when the krone was subject to pressure and purchased foreign exchange in other periods. In net terms intervention in the foreign-exchange market reduced the foreign-exchange reserve by kr. 29 billion.

The Nationalbank raised its official interest rates when the krone came under pressure in May and September 1998. In the final months of 1998 and the beginning of 1999 the interest rates were lowered on several occasions in step with the Nationalbank's purchases of foreign exchange. In December 1998 the Nationalbank also lowered the interest rates after a coordinated lowering of interest rates in the 11 euro area member states.

FOREIGN-EXCHANGE POLICY AFTER THE INTRODUCTION OF THE EURO

The fixed-exchange-rate policy has been a cornerstone of Denmark's economic policy since the beginning of the 1980s. Stabilising the krone against the currencies of low-inflation countries creates a framework for low inflation in Denmark. The fixed-exchange-rate policy entails a clear dividing line between monetary and fiscal policy. Monetary policy is designed to maintain a stable krone rate, while it is up to fiscal policy to stabilise the development in wages and prices.

Up to the introduction of the euro on 1 January 1999 the exchange-rate mechanism, ERM, of the European Monetary System, EMS, was the formal framework for Denmark's fixed-exchange-rate policy. The foreign-exchange-policy objective was stated more clearly as a result of the widening of the ERM fluctuation band in 1993. The objective applied until 31 December 1998 was to maintain a stable krone rate against the core currencies of the EMS: the D-mark, the Dutch guilder, the Belgian franc, the French franc and as from 1995, the Austrian schilling.

As a consequence of the introduction of the euro, as from 1 January 1999, the EMS was replaced by a new voluntary exchange-rate mech-

anism, ERM II. The purpose of ERM II is to ensure exchange-rate stability between the euro area and the EU member states not adopting the single currency. ERM II is described in more detail on p. 83ff.

As a natural continuation of the fixed-exchange-rate policy Denmark has concluded an agreement on participation in ERM II with the euro area member states and the European Central Bank, ECB. This means that monetary policy is designed to maintain a stable krone rate against the euro. Denmark participates in ERM II with a central rate against the euro of kr. 746.038 per 100 euro and a fluctuation band of +/-2.25 per cent, cf. the press release on p. 130. The krone's central rate against the euro in ERM II is calculated on the basis of the krone's previous central rate against the D-mark and the conversion rate from D-mark to euro.

The ERM II agreement is the formal basis for the continuation of the fixed-exchange-rate policy. However, the agreement cannot in itself guarantee the krone's stability. This requires a consistent, stability-oriented economic policy. By entering into this agreement the Danish government has signalled its intention to pursue an economic policy in accordance with the requirements set by the fixed-exchange-rate policy.

In recent years the Nationalbank has stabilised the krone close to its central rate against the D-mark. This policy will be continued within the framework of ERM II, but now with the euro as the "anchor" currency. The fixed-exchange-rate policy entails that any unrest involving the krone will be countered by purchase or sale of foreign exchange and/or adjustment of the Nationalbank's interest rates.

Greece also participates in ERM II, while the UK and Sweden did not wish to conclude an agreement. Greece participates in ERM II with the system's standard fluctuation band against the euro of +/-15 per cent.

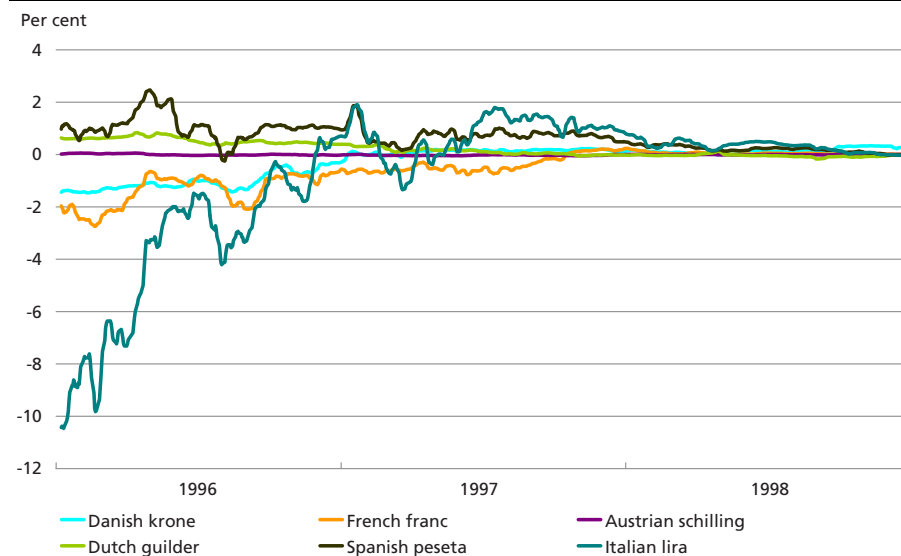
THE EUROPEAN MONETARY SYSTEM IN 1998

Up to the irrevocable fixing of the exchange rates on 31 December 1998 and the transition to the euro, the exchange-rate relations between the ERM currencies were characterised by continued convergence towards the central rates, cf. Chart 10.

The convergence which has characterised the exchange rates within the ERM for the last 2-3 years accelerated after the formal decision in May 1998 on the countries to participate in the third stage of Economic and Monetary Union as from 1 January 1999. At the same time, the bilateral conversion rates between the participating countries' currencies were announced. As expected it was decided that the previous central rates would be the basis for the conversion rates to euro.

SELECTED EMS CURRENCIES VIS-À-VIS THE D-MARK

Chart 10



Note: Deviations from central rate. 5-day moving average.

Throughout 1998 the krone was very close to its central rate against the D-mark.

The Greek drachma joined the ERM on 16 March 1998 with a central rate of kr. 2,11276 per GRD 100, cf. the press release on p. 128. The background to Greece's decision to join the ERM is the country's wish to participate in the third stage of EMU in 2001.

At the same time the central rate of the Irish pound was written up by 3 per cent against the other ERM currencies, as the market rate had been higher than the central rate for a prolonged period. The market rate for the Irish pound was thereafter close to the new central rate vis-à-vis the D-mark.

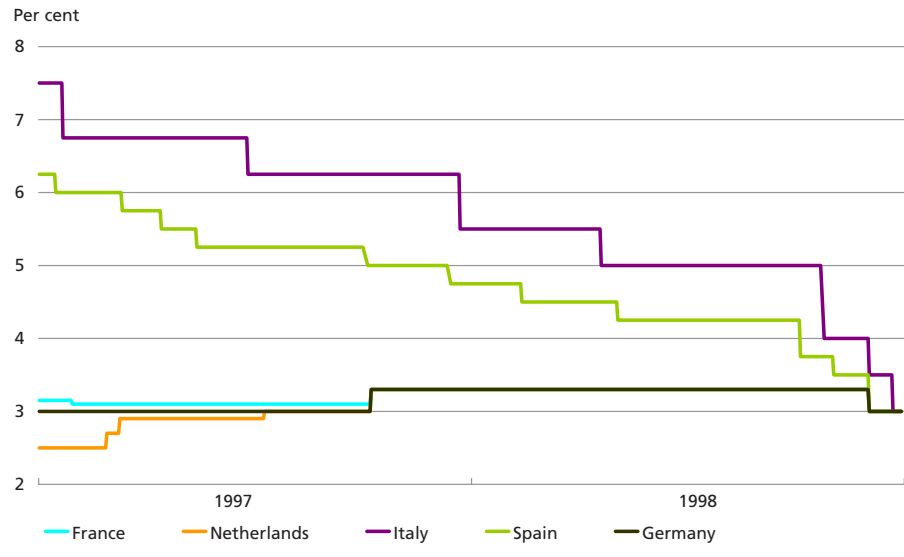
Trading of the euro began on 4 January 1999 when currency markets opened after New Year. The practical changeover to the euro was smooth. During the first days the euro strengthened marginally against the dollar and the yen, but then weakened somewhat.

Development in interest rates

After the designation in May 1998 of the 11 euro area member states and up to the close of the year the official interest rates of the other participating countries were aligned to the level in Germany, France, the Netherlands, Belgium and Austria, cf. Chart 11. On 3 December the central banks of the future euro area member states lowered their interest rates as a coordinated measure. This brought the central official interest rates in

OFFICIAL INTEREST RATES IN SELECTED EMS COUNTRIES

Chart 11



the euro area down to 3 per cent. In Italy, however, the interest rate was lowered to the common level with effect from 23 December 1998.

On 1 January 1999 the ECB took over responsibility for the single monetary policy and commenced its monetary-policy operations by fixing the rate of interest for the main refinancing operations, the central official interest rate, at 3 per cent.

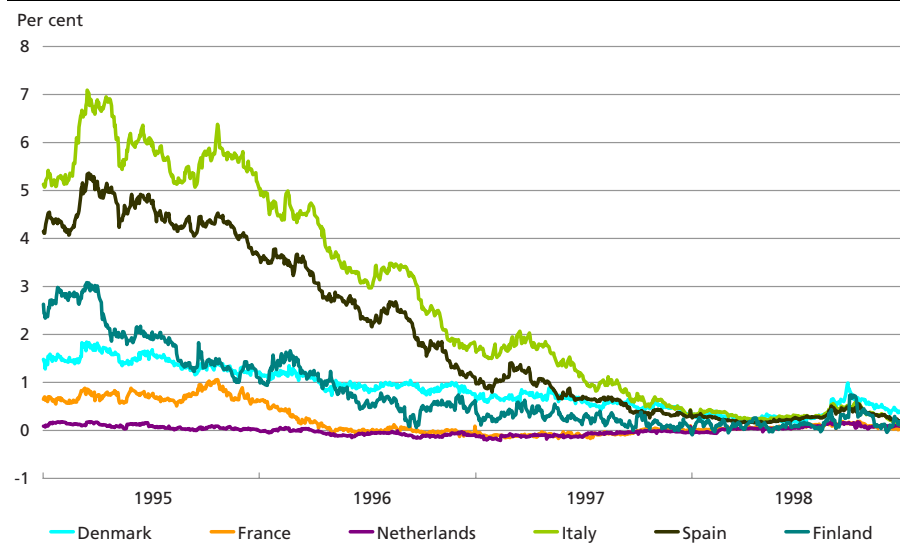
The adjustment of the official interest rates to a common level led to equivalent convergence in the short-term money-market interest rates among the future euro area member states.

Throughout 1998 the Danish inter-bank interest rate was above the level in the former core EMS countries, and was subject to considerable volatility in connection with unrest involving the krone and the other Scandinavian currencies. During the currency unrest in September the short-term interest-rate differential to Germany widened to around 2 per cent for a brief period. In February 1999 the interest-rate differential had narrowed to around 0.5 per cent.

In the first half of 1998 the long-term yields of the former high-interest countries, Spain, Portugal and Italy, continued to converge towards the German level, while the yield differentials for the other member states were relatively unchanged, cf. Chart 12. The unrest on the international financial markets in August and September led to a general widening of yield differentials to Germany, cf. p. 51. Towards the end of the year the yield differentials narrowed back to the level before the unrest.

LONG-TERM YIELD DIFFERENTIALS TO GERMANY

Chart 12



Note: 10-year government bonds.

Yield differentials between government bonds issued by the euro area member states after the introduction of the single currency can still occur. This is due to varying evaluation of the credit risk and liquidity of the various issues.

INTEREST RATES IN DENMARK

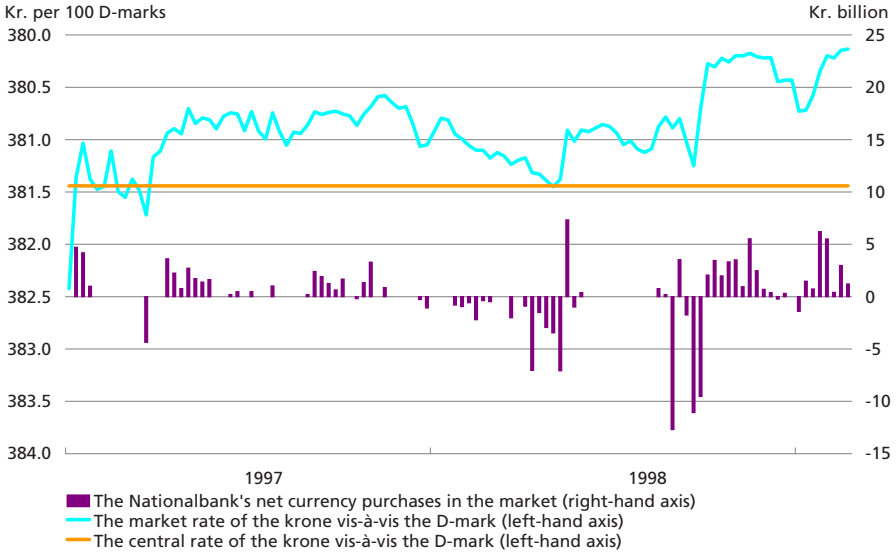
At the beginning of 1998 the krone showed a tendency to weaken against the D-mark, particularly as a consequence of market uncertainty concerning the outcome of the referendum on the Amsterdam Treaty on 28 May, and the Nationalbank sold foreign exchange. As from the beginning of April this tendency gained momentum and the krone weakened further to a level close to its central rate, since uncertainty in the foreign-exchange market had been augmented by the labour-market dispute, cf. Chart 13. In April the Nationalbank sold currency for kr. 16 billion in support of the krone.

The Nationalbank continued to sell foreign exchange in May and on 6 May 1998 raised the discount rate by 0.5 per cent to 4.00 per cent. At the same time the interest rate on certificates of deposit and the repo rate were raised equivalently to 4.25 per cent.

After the elimination of the uncertainty which had arisen in the foreign-exchange market prior to the referendum the Nationalbank on 29 May lowered the discount rate and the rate of interest on certificates

THE NATIONALBANK'S NET PURCHASES OF CURRENCY AND THE KRONE RATE AGAINST THE D-MARK

Chart 13



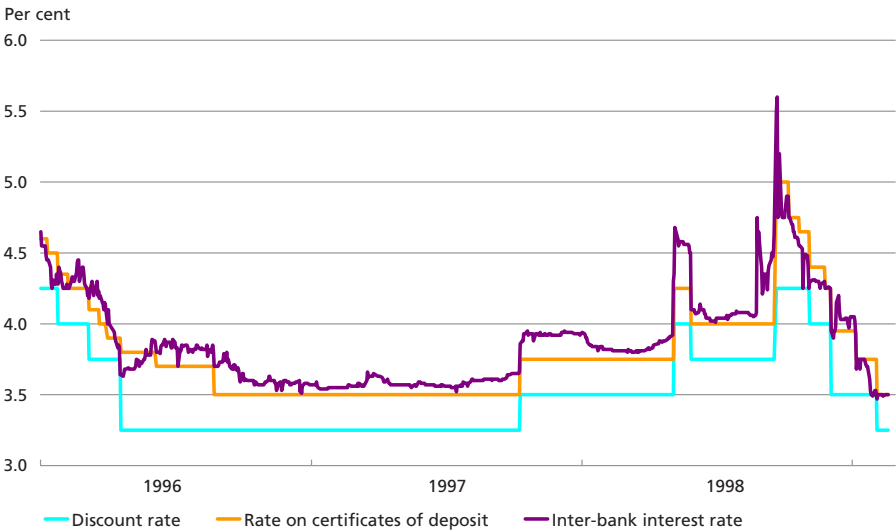
Note: Weekly observations.

of deposit and the repo rate by 0.25 per cent to respectively 3.75 and 4.00 per cent.

After interest rates were lowered in May and up to the end of August the Nationalbank's intervention in the foreign-exchange market was negligible. The situation changed when, in response to sustained pres-

OFFICIAL INTEREST RATES AND 3-MONTH INTER-BANK INTEREST RATE IN DENMARK

Chart 14



sure against the Norwegian krone, Norges Bank on 24 August in reality allowed the Norwegian krone to float, after repeated interest-rate increases. The Danish krone came under shortlived pressure and the Nationalbank intervened for considerable amounts. The inter-bank interest rates rose strongly, cf. Chart 14, putting a premium on speculation against the krone. This helped to stabilise the krone rate and the pressure soon subsided.

In September the Danish foreign-exchange market was affected by the unrest on the international financial markets and the krone came under pressure again. The Nationalbank again had to intervene. The intervention requirement proved to be more persistent than in August and the official interest rates were raised with effect from 21 September. The discount rate was lifted by 0.5 per cent to 4.25 per cent and the rate of interest for certificates of deposit and the repo rate by 1.00 per cent to 5.00 per cent.

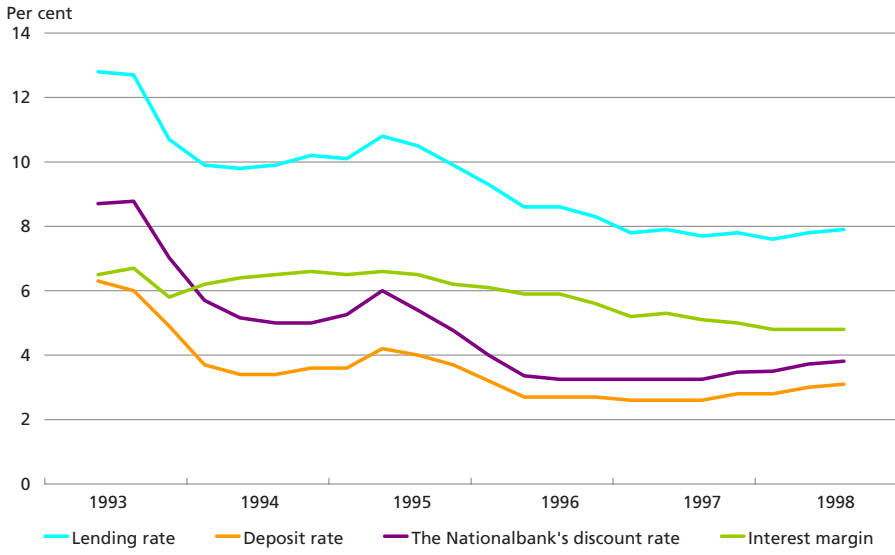
The pressure against the krone continued on the day after interest rates were raised due to uncertainty concerning the Scandinavian currencies after the election in Sweden and the Nationalbank again had to intervene. The pressure soon subsided, however, and the Nationalbank could buy currency in the market as the krone strengthened. In the last three months of the year the Nationalbank repurchased a considerable proportion of the foreign exchange used to support the krone in August and September, cf. Chart 13. This made it possible to lower the official interest rates on several occasions during the autumn. The rate of interest for certificates of deposit and the repo rate were lowered by 0.25 per cent on 8 October, by 0.10 per cent on 22 October, by 0.25 per cent on 5 November and finally by 0.15 per cent on 26 November, to 4.25 per cent. Simultaneously with the reduction of the repo rate on 5 November the discount rate was lowered by 0.25 per cent to 4.00 per cent.

On 3 December the central banks of the future euro area member states as a coordinated measure lowered the central official interest rates to 3.00 per cent, i.e. by 0.30 per cent with regard to the Bundesbank and most other central banks. In view of the continued strong and stable krone and the good progress towards normalisation of Danish interest-rate conditions the Nationalbank followed the euro area member states' lowering of interest rates with an equivalent reduction of the repo rate and the rate of interest on certificates of deposit by 0.30 per cent to 3.95 per cent. The discount rate was lowered by 0.5 per cent to 3.5 per cent. The adjustment took effect on 4 December.

On 7 January 1999 the Nationalbank lowered the rate of interest for certificates of deposit and the repo rate by 0.20 per cent to 3.75 per cent. In view of the continued inflow of currency the Nationalbank on 4

THE BANKS' AVERAGE LENDING AND DEPOSIT RATES

Chart 15



Note: Quarterly averages.

February lowered the discount rate by 0.25 per cent to 3.25 per cent. The rate of interest for certificates of deposit and the repo rate were also lowered by 0.25 per cent to 3.5 per cent.

The banks' deposit and lending rates

From the 4th quarter of 1997 to the 3rd quarter of 1998 the banks' average lending and deposit rates rose by respectively 0.1 per cent and 0.3 per cent. Interest-rate statistics for the 4th quarter of 1998 are not yet available. The banks' interest rates vis-à-vis customers hereby matched the Nationalbank's discount rate which – measured as a quarterly average – rose by 0.3 per cent in the same period.

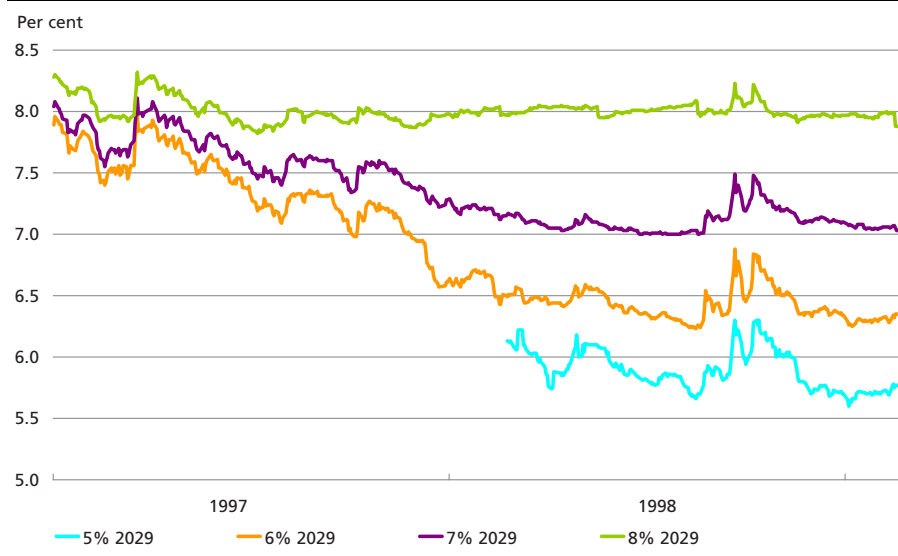
The interest margin declined further in both 1997 and in 1998, cf. Chart 15. In the preceding years the falling level of interest rates was a significant factor behind the narrowing of the interest margin since the deposit rates for a number of deposit categories were so low that they could not fall in step with lending rates. In 1997 and 1998 there was an, albeit modest, increase in interest rates which might have led to a widening of the interest margin is unchanged deposit rates were maintained. This did not happen, however.

Bond yields

In 1998 the yield to maturity on 10-year government bonds fell by 1.4 per cent to 4.2 per cent. The decline continued in 1999 and at end-January the bond yield reached a historic low of around 4 per cent. Up

YIELD TO MATURITY ON 30-YEAR MORTGAGE-CREDIT BONDS

Chart 16



to mid-July 1998 the decline was accompanied by a narrowing of the yield differential to Germany to 0.2 per cent. For a period the yield differential widened to 1 per cent in connection with the unrest on international financial markets in August and September. However, the yield differential then narrowed and was 0.4 per cent in February 1999.

The yield to maturity on 30-year mortgage-credit bonds with a coupon rate of 6 per cent maturing in 2029 fell by 0.3 per cent from 6.6 per cent at the beginning of 1998 to 6.3 per cent at the beginning of 1999, cf. Chart 16. In the same period the yield on equivalent 5-per-cent bonds fell from 6.3 per cent to 5.8 per cent. The development in bond yields has made it advantageous in many cases to convert mortgage-credit loans to loans at a lower coupon rate. The volume of conversions in 1998 and at the beginning of 1999 was close to the level during the conversion wave in 1993-94, although the increase in home owners' disposable income due to the conversions was less than during the first conversion wave. The drop in mortgage-credit-bond yields was lower than for government bonds, even after adjustment for the greater conversion risk. Other factors contributing to the widening of the yield differential are described on p. 60.

CAPITAL FLOWS AND THE FOREIGN-EXCHANGE RESERVE

The deficit on the current account of the balance of payments is estimated to be kr. 16 billion in 1998. Private capital flows entailed net

CAPITAL FLOWS		Table 5
Net receipts, kr. billion	1997	1998
The current account of the balance of payments	6.1	- 16.0
Capital transfers	0.7	0.1
Private capital flows:		
Portfolio investments ¹⁾	33.9	- 41.8
Direct investments ²⁾	- 9.3	- 4.5
Financial derivatives	- 1.6	- 0.4
Lending and deposits ³⁾	32.2	26.2
Estimate of unrecorded commercial credits	4.1	8.8
Errors and omissions	- 21.7	- 1.2
The Nationalbank's net purchase of foreign exchange	44.4	- 28.7
Used as follows:		
To reduce the central government's foreign debt	1.3	21.7
For the central government's sale of Tele Danmark shares to abroad		- 21.2
To increase the foreign-exchange reserve	43.0	- 29.2

Note: Excluding value adjustments, etc.

¹⁾ Excluding the central government's foreign bond issues.

²⁾ Excluding the central government's sale of Tele Danmark shares.

³⁾ Excluding the central government's foreign bank loans.

capital exports of kr. 13 billion. The Nationalbank sold currency for kr. 28.7 billion and for the year as a whole the foreign-exchange reserve decreased by kr. 29.2 billion excluding value adjustments, cf. Table 5.

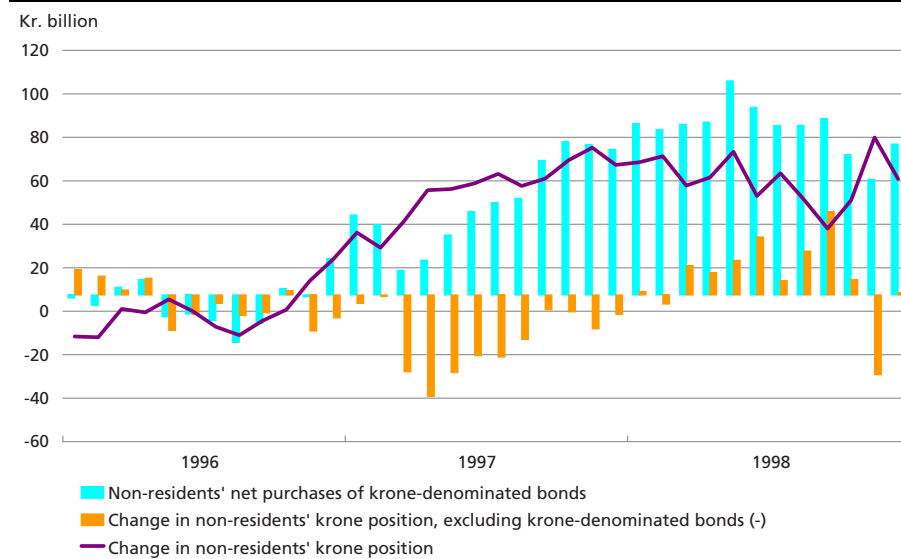
From January to August the foreign-exchange reserve was affected by the central government's sale in January 1998 of Tele Danmark shares to abroad for kr. 21.2 billion. During 1998 the proceeds from this sale were used to reduce the central government's foreign debt which overall fell by kr. 21.7 billion.

In 1998 portfolio investments led to net capital exports of kr. 42 billion. Non-residents' net purchases of krone-denominated bonds were kr. 2 billion, while their net purchases of Danish bonds denominated in foreign exchange amounted to kr. 22 billion. Non-residents' net sales of Danish shares totalled kr. 15 billion. Residents' net purchases of foreign securities amounted to kr. 52 billion, comprising shares for kr. 31 billion and bonds for kr. 22 billion.

Non-residents often hedge the krone-rate risk on portfolios of krone-denominated bonds by raising loans in kroner or via the forward foreign-exchange market. Hedging eliminates the exchange-rate risk on the overall position. Any fluctuations in the krone rate will equivalently affect the value of assets and liabilities, so that the investor is subject only to an interest-rate risk in Danish kroner (a short-term debt denominated in kroner against a long-term asset in kroner). These transactions

CHANGE IN NON-RESIDENTS' HOLDINGS OF KRONE-DENOMINATED BONDS
AND KRONE POSITION SINCE THE BEGINNING OF 1996

Chart 17



mean that the supply of and demand for kroner will increase or decrease by exactly the same amount, and the transactions therefore do not affect the exchange rate of the krone.

Adjustment of the fluctuation in non-residents' holdings of krone-denominated bonds for Danish banks' krone-denominated lending to non-residents and positions in the forward foreign-exchange market gives an indicator of non-residents' (net) krone position. An increase in non-residents' position in kroner reflects an increase in non-residents' demand for kroner which – viewed in isolation – will exert upward pressure on the krone.

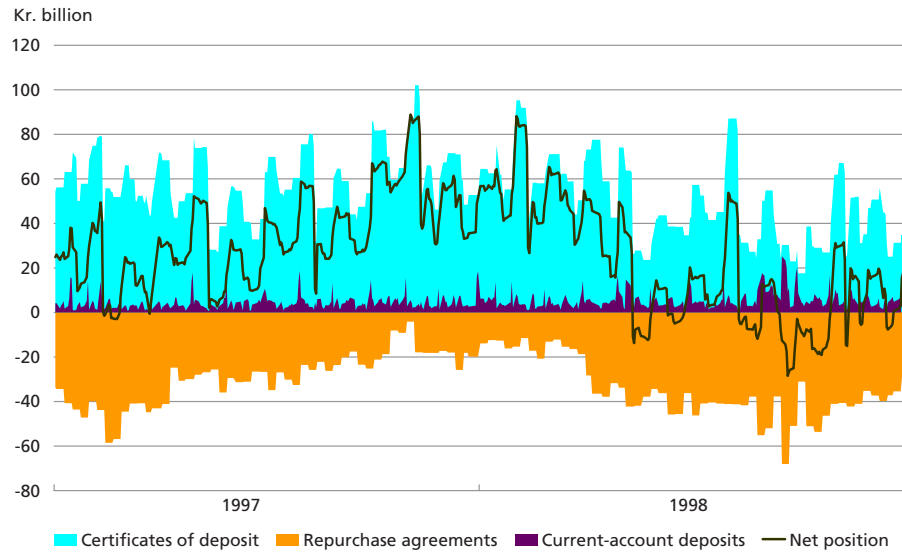
For certain periods of 1998 non-residents' holdings of krone-denominated bonds fluctuated against non-residents' overall position in kroner, cf. Chart 17. This does not necessarily reflect changes in the hedging of the exchange-rate risk associated with non-residents' holdings of krone-denominated bonds. It may for example also be due to open positions being taken with or against the krone in the forward foreign-exchange market.

THE BANKS' LIQUIDITY

When the Nationalbank sells foreign exchange and purchases kroner the banks' net position with the Nationalbank is reduced. The Nationalbank's sales of foreign exchange during the spring of 1998 contributed

THE BANKS' ACCOUNTS WITH THE NATIONALBANK

Chart 18



to the gradual reduction in the banks' net assets with the Nationalbank, cf. Chart 18. This trend was reinforced by the Nationalbank's sales of foreign exchange in August and September. On the other hand, the foreign-exchange purchases in the 4th quarter of 1998 improved the banks' net position so that the net balance was again positive at the end of the year.

The substantial day-to-day fluctuations in the banks' net position are related to the central government's receipts and disbursements. The central-government payments do not affect the overall liquidity of the banks for the year as a whole. This is because the central government's gross domestic borrowing requirement (the gross borrowing requirement excluding redemption of foreign loans) is financed in full by issuing krone-denominated government securities.

THE MONETARY-POLICY INSTRUMENTS

The Nationalbank conducts monetary policy via the terms for overnight current-account deposits and for the weekly market operations whereby the banks can borrow by entering into repurchase agreements or by placing funds in certificates of deposit. The weekly market operations have a maturity of 14 days.

The Nationalbank provides liquidity to the banks via weekly repurchase agreements. Liquidity is supplied against government bonds as collateral. The Nationalbank absorbs liquidity by weekly sale of certi-

ificates of deposit to the banks. In connection with the weekly market operations the banks taken as one normally tailor their net position to providing current-account balances to cover the expected liquidity requirement for the following week. If large central-government receipts or disbursements are already foreseen the Nationalbank will as an extraordinary measure repurchase/sell certificates of deposit during the week.

Adjustment of the monetary-policy instruments

The terms for the Nationalbank's monetary-policy operations will be changed in a number of respects during the spring of 1999. These technical adjustments will not entail any changes in the overall framework. The instruments will still comprise interest-bearing current accounts and operations with 14 days' maturity.

Under the amended regime the collateral basis for the counterparties' intra-day borrowing from the Nationalbank and in connection with monetary-policy transactions will be harmonised and amalgamated in one shared collateral pool. In practice, the harmonisation will take place by expanding the collateral basis in connection with monetary-policy operations to include mortgage-credit bonds and certain other bonds. Certificates of deposit can still only be used as collateral for intra-day credit. The group of counterparties in connection with the monetary-policy operations is extended to also include mortgage-credit institutes.

In order to be able to handle the expanded collateral basis lending against collateral will replace repurchase agreements in the Nationalbank's monetary-policy operations. Furthermore, a uniform set of guidelines is introduced for the counterparties' provision of collateral to the Nationalbank. Today, the banks may borrow against the full market value of the underlying bonds on entering into repurchase agreements with the Nationalbank. In future the borrowing ratio will be less than 100 and will depend on the market risk associated with the securities used as collateral.

As a consequence of the expansion of the collateral basis a ceiling for current-account deposits with the Nationalbank at the end of the day is introduced. Should this individual ceiling be exceeded the Nationalbank will automatically convert any excess amounts to certificates of deposit. However, this measure will be used only in cases where the total ceiling for banks and mortgage-credit institutes taken as one is exceeded.

International Capital Markets

In 1998 the international capital markets were affected by the turbulence which began in Southeast Asia in 1997. From August, the situation was further aggravated when Russia suspended payments on its debt and abandoned its pegging of the rouble to the dollar. The crisis in Russia affected the capital markets in many other countries, especially in Latin America. The demand for safe, liquid government bonds from the industrialised countries increased at the expense of other bonds and shares. From the end of October the turbulence subsided and to some extent the capital markets returned to normal.

On the foreign-exchange markets the dollar depreciated against the D-mark and the yen. Prices generally rose on the international stock markets of the industrialised countries, although interrupted by strong price drops in connection with the Russian crisis.

INTEREST RATES

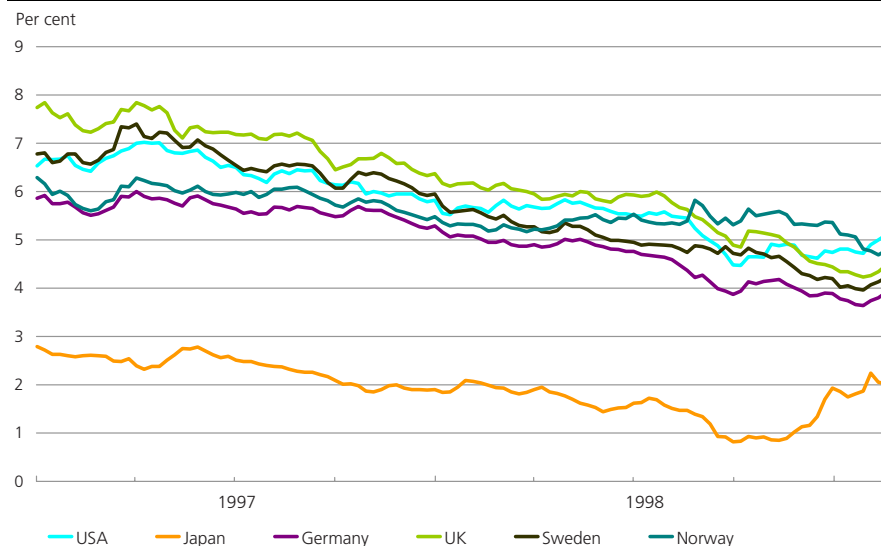
Development in interest rates

Long-term yields in the *USA* declined during 1998, cf. Chart 19. During the first half of the year the weak Asian economies and low commodity prices helped to keep inflation down, despite high growth and high capacity utilisation. Against the background of the turbulence on the international financial markets in August and September, the Federal Reserve in September, October and November lowered the official short-term US interest rate – the federal funds rate – by a total of 0.75 per cent to 4.75 per cent. The interest rates were also lowered to ward off credit-tightening as a consequence of losses in the US banking sector in connection with the financial-market turbulence. The turbulence released strong demand for "safe" government bonds, which resulted in a significant drop in US long-term yields. From October the financial markets stabilised as a consequence of the lowering of interest rates (including in the other industrialised countries), the approval of an IMF-coordinated loan package for Brazil, and important political measures in Japan directed at the banking sector and the economy. The drop in long-term yields in the *USA* subsided. Yields fell by 1.1 per cent over the year.

In *Japan* long-term yields continued the receding trend from 1997, cf. Chart 19. The drop in interest rates was supported by the Bank of Japan

YIELDS ON 10-YEAR BONDS IN THE USA, JAPAN, GERMANY,
THE UK, SWEDEN AND NORWAY

Chart 19



Note: Weekly observations.

via low official interest rates and the provision of ample liquidity. The discount rate was unchanged at 0.5 per cent, although in September a leading interest rate was lowered by 0.2 per cent to 0.25 per cent.

The drop in long-term yields was interrupted by a strong increase by more than 1.0 per cent in November and December, when fears arose that the deterioration in government finances would significantly increase the supply of government bonds. At the same time it was clear that bond purchases by public institutions would be significantly lower than expected. In 1998 Japan's growth diminished further after the collapse of many Southeast Asian economies. The crisis in the banking sector also worsened, cf. Box 2.

In *Germany* the official short-term interest rate – the repo rate – was unchanged at 3.30 per cent until December when the Bundesbank lowered the rate by 0.30 per cent as part of a coordinated action by the coming euro area member states. Low inflationary pressure and the falling US interest rates contributed to a decline in Germany's long-term yields by 1.4 per cent over the year, cf. Chart 19. As in the other major industrialised countries the drop in interest rates was particularly pronounced from August 1998.

In the *UK* the Bank of England raised the repo rate in June by 0.25 per cent to 7.5 per cent in order to counter the inflationary pressure resulting from a tight labour market, rising wage pressure and the weakening of the pound sterling which began in April, cf. Chart 23.

THE CRISIS IN THE JAPANESE BANKING SECTOR

Box 2

Since the collapse of the Japanese real estate and stock market at the beginning of the 1990s the Japanese banks have suffered a profound crisis. The crisis was aggravated in 1998 as a consequence of weak domestic demand and the collapse of the Southeast Asian economies. This led to an increase in the proportion of defaulted loans. The banks also suffered high unrealised capital losses on their share portfolios as a consequence of the drop in equity prices. More stringent and more appropriate requirements of financial statements and identification of bad loans increased the pressure on the Japanese banks to strengthen their capital base and financial soundness. In their efforts to achieve this, the Japanese banks have scaled down e.g. their lending activities. This created financing problems for business enterprises and exacerbated the state of the domestic economy. The banking crisis and the economic crisis developed into a vicious circle.

In October the Japanese government therefore approved comprehensive measures to revive the weak Japanese banking system. The plan was based on a framework of 60 trillion yen (approximately kr. 3,400 billion, or 12 per cent of Japan's GDP) distributed as 18 trillion yen for the nationalisation of banks, 25 trillion yen for recapitalisation of banks, and 17 trillion yen for depositor insurance. The plan also entailed the establishment of new institutions, which e.g. in connection with bank crises will take over a significant proportion of the responsibilities of the Ministry of Finance.

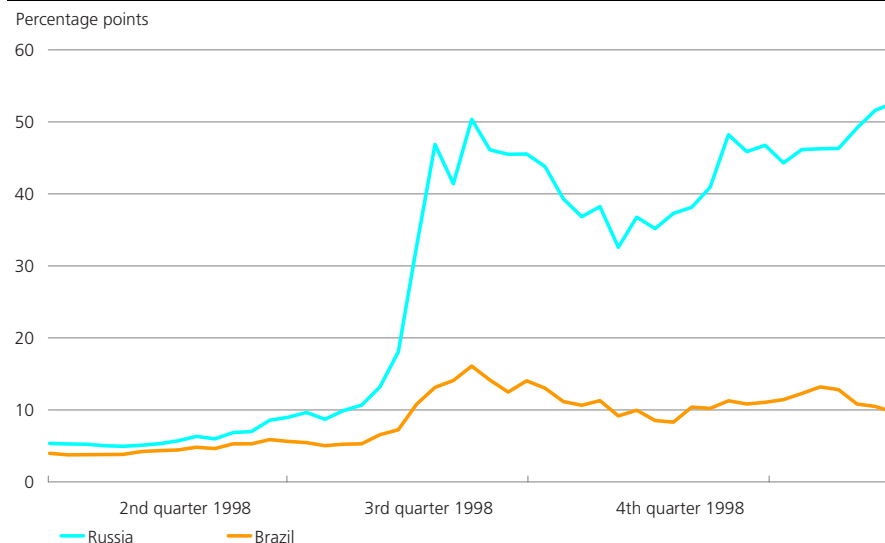
The less favourable global growth prospects as a consequence of the financial turbulence in August and September, and ever clearer signs of a dampening of domestic growth, led to a lowering of interest rates in October, November and December by 1.25 per cent in total. Long-term yields were relatively stable in the 1st half-year, but fell strongly in the 2nd half-year, cf. Chart 19. Over the year they declined by 2.0 per cent.

Falling oil prices and a danger of overheating of the economy led to pressure against the *Norwegian* krone. The short-term official Norwegian interest rate – the current-account interest rate – was raised in seven stages by a total of 4.5 per cent to 8.0 per cent. Long-term yields remained by and large unchanged over the year, but rose in connection with the Norwegian currency unrest, cf. Chart 19.

In *Sweden* the Riksbank lowered the repo rate in June, since lower inflation than expected made it possible to relax monetary policy within the framework of the inflation target. In 1998 long-term yields fell by 1.8 per cent, cf. Chart 19.

THE 10-YEAR YIELD DIFFERENTIALS OF RUSSIA AND BRAZIL TO THE USA

Chart 20



Note: Weekly observations. Yield differential: difference in yields between Russian/Brazilian 10-year government bonds denominated in dollars, and US 10-year government bond.

Effects of the crisis in Russia: increased risk aversion and widening of yield differentials

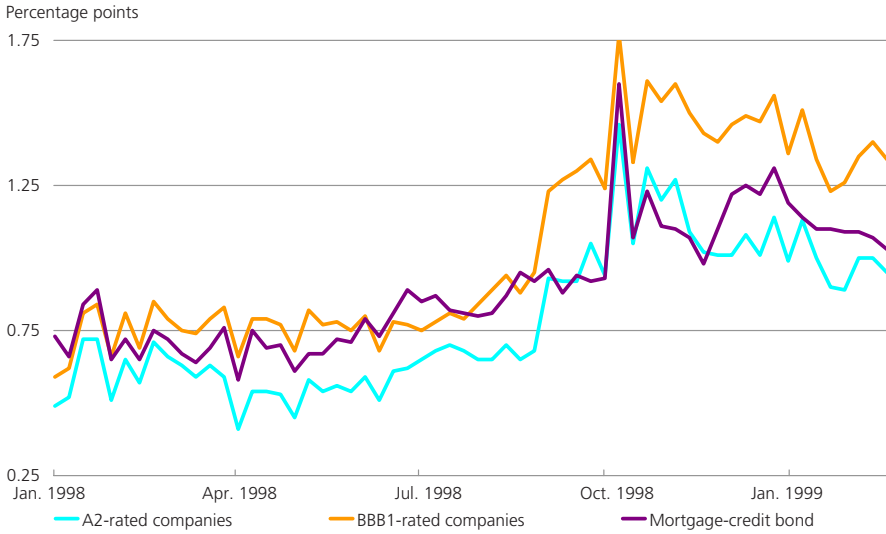
In August Russia suspended payments on its debt and abandoned the pegging of the rouble to the dollar. The resulting turbulence significantly increased investors' risk aversion. The demand for government bonds issued by the industrialised countries rose and as stated led to a strong international drop in interest rates. The falling interest rates were accompanied by significant widenings of the yield differentials between the benchmark government bonds of the major industrialised countries and bonds entailing a higher credit or liquidity risk. There were also substantial price drops on stock markets, cf. p. 57.

The widening of the yield differentials was particularly pronounced for bond issues from emerging markets, cf. Chart 20, but was also significant for bonds issued by the smaller industrialised countries. The 10-year yield differentials of most EU member states vis-à-vis Germany thus widened. Investors' increased risk aversion also widened the differentials in individual countries between yields on mortgage-credit/corporate bonds and government bonds, cf. Chart 21.

In view of their low credit and liquidity risk the benchmark bonds of the major industrialised countries were particularly favoured by the flight to safety. Moreover, market participants expected that the financial crisis would lead to lower growth and inflation, and thereby

YIELD DIFFERENTIAL BETWEEN MORTGAGE-CREDIT AND CORPORATE BONDS AND GOVERNMENT BONDS IN THE USA

Chart 21



Note: Mortgage-credit differential: the yield differential between 30-year US Mortgage-Backed Security and 30-year government bond. Corporate differential: the yield differential between 10-year US A2/BBB1-rated corporate issues and 10-year government bond. Weekly observations.

monetary-policy relaxations, in these countries. In the course of the 3rd quarter US, Japanese, German and UK 10-year yields fell by between 0.75 per cent and 1.0 per cent.

The general widening of differentials caused difficulties for a major US hedge fund, Long Term Capital Management (LTCM), cf. Box 3. For borrowed funds LTCM had speculated extensively in a general narrowing of yield differentials, e.g. a lower yield differential between new and existing issues of government bonds, corporate and government bonds, mortgage-credit and government bonds, etc. When the problems faced by LTCM became known in September, the yield differentials widened. The background was fear that LTCM and other hedge funds with a similar investment strategy would reverse their positions.

In order to cover losses ensuing from the crisis in Russia, at the beginning of October hedge funds and other investors took advantage of the high price levels for the benchmark long-term government bonds to close out their positions in those bonds. Some of the positions in the benchmark government bonds and the unprofitable placements in emerging markets were financed by yen loans. The appreciation of the yen at the beginning of October, cf. Chart 22, therefore strengthened the incentive to close out positions in benchmark bonds. The result was

HEDGE FUNDS

Box 3

A hedge fund is a mutual fund with an investment strategy which often entails a considerable element of speculation and high gearing of equity capital. Investment strategies – and thereby positions in relation to the financial markets – can vary considerably among hedge funds. Some mainly take positions in relation to macroeconomic variables, e.g. based on expectations of exchange-rate fluctuations, while others take positions in relation to special events which might e.g. affect the development in a certain share price or a stock index. A third group is based on market-neutral strategies: buying assets ("being long") which are found to be undervalued in relation to the market, and selling or borrowing assets ("being short") which are found to be overvalued. LTCM belongs to the last-mentioned group.

a brief reversal at the beginning of October of the drop in long-term yields, cf. Chart 19.

The course taken by financial markets in 1998 shows how financial unrest in one country can quickly spread to another. It has also shown that the growing complexity of the financial markets makes it difficult to manage risk. These two factors have contributed to new discussion of the future design of the global financial markets, including how their structural and institutional framework can be improved, so as to avoid a financial crisis from developing at the pace and on the scale seen in 1998. In these discussions, it was among other things recognised that improvements must be made to market transparency and the supervisory role played by the authorities (particularly in emerging markets).

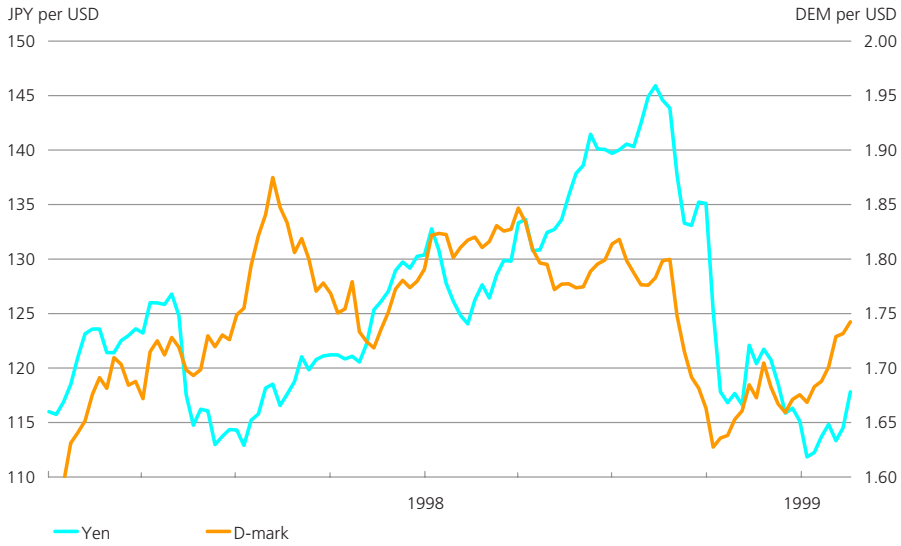
In February 1999 the group of major industrialised countries, G7, resolved to appoint a secretariat under the Bank for International Settlements, BIS, to coordinate and strengthen international supervisory cooperation.

FOREIGN-EXCHANGE MARKETS

In 1998 the dollar depreciated by 7 per cent against the *D-mark*, cf. Chart 22. Greater "eurooptimism" after the selection of the 11 euro area member states in May and signs of an increase in economic activity in Germany weakened the dollar in early summer. The dollar came under pressure again in late summer, when fears arose that the crisis in Russia would spread to Latin America, and thereby affect the US economy more severely. It was also a widespread belief that falling equity prices, cf. Chart 26, would more significantly affect the US economy, because

DOLLAR VIS-À-VIS YEN AND D-MARK

Chart 22



Note: Weekly observations.

US households' share portfolios are larger than those of households in other industrialised countries, so that the potential consumption-dampening effect of decreases in equity prices is greater. In the last quarter of the year and at the beginning of 1999 the dollar regained some of the lost ground. The dollar's rise was to a high degree a result of prospects of continued stronger economic growth in the USA than in Germany, and receding expectations of a further lowering of the US interest rate.

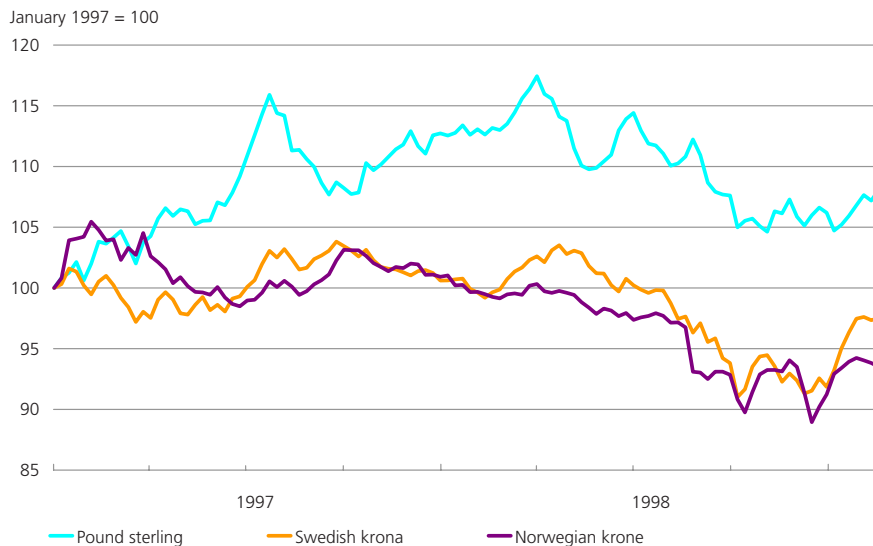
The dollar weakened by 15 per cent against the *yen* in 1998 after substantial fluctuations during the year. Continued deterioration in the Japanese economy, concern about the financial sector's stability and uncertainty regarding future fiscal-policy measures caused the yen to weaken strongly against the dollar up to August, despite joint Japanese/US intervention to support the yen in the foreign-exchange market on 17 June 1998. From August the yen strengthened considerably, among other reasons because hedge funds and other borrowers closed out yen loans. This was supported by a restoration plan for the Japanese banking sector, a record-high package of measures to stimulate the economy, and a narrowing of the US/Japanese yield differential.

The *pound sterling* generally followed the dollar and weakened by 6 per cent against the D-mark in 1998, cf. Chart 23.

Both the *Norwegian krone* and the *Swedish krona* depreciated by approximately 9 per cent against the D-mark, cf. Chart 23. In Norway

**POUND STERLING, SWEDISH KRONA AND NORWEGIAN KRONE
VIS-À-VIS THE D-MARK**

Chart 23

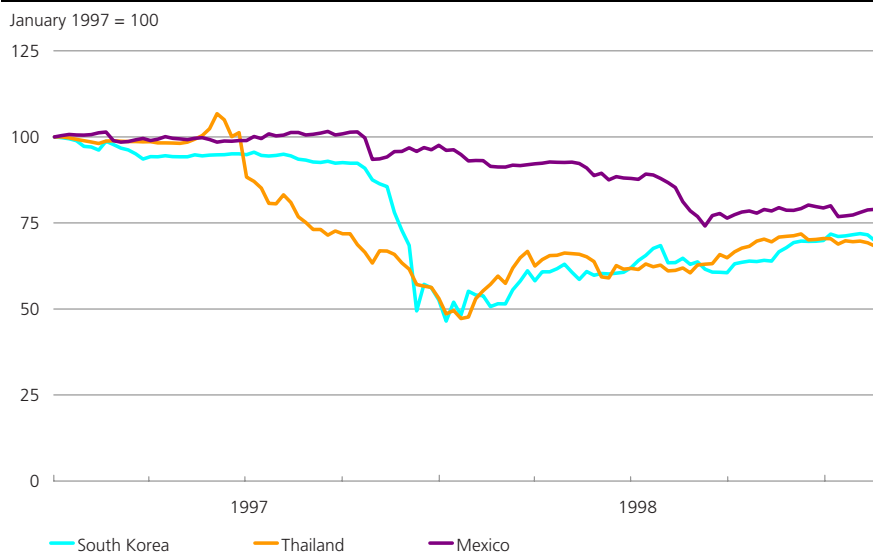


Note: Weekly observations.

growth has been high for several years. As a consequence of falling oil prices and uncertainty concerning economic policy the Norwegian krone came under pressure in March. Norges Bank raised its interest rates in several stages and intervened in the foreign-exchange market to

**EXCHANGE RATES OF SOUTH KOREA, THAILAND
AND MEXICO VIS-À-VIS THE DOLLAR**

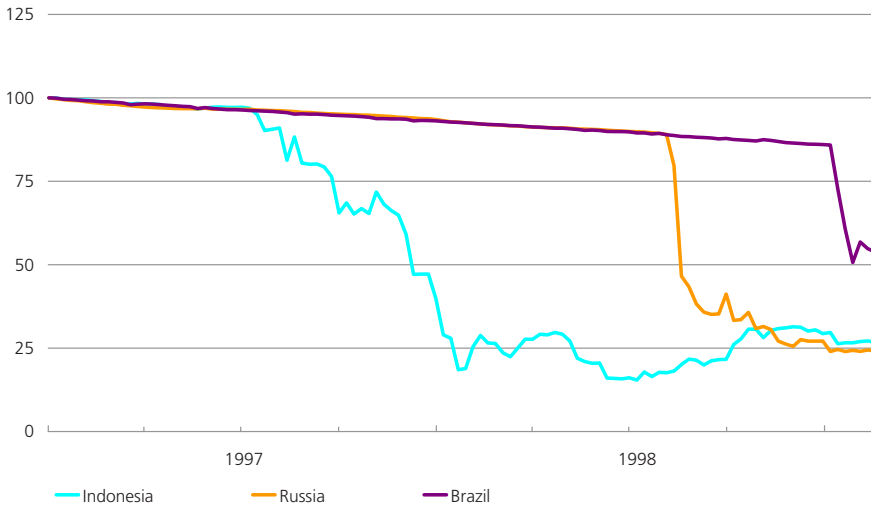
Chart 24



Note: Weekly observations.

EXCHANGE RATES OF INDONESIA, RUSSIA AND BRAZIL VIS-À-VIS THE DOLLAR Chart 25

January 1997 = 100



Note: Weekly observations.

support the krone, but in August abandoned its defence of the exchange rate. The unrest concerning the Norwegian krone also affected the Swedish krona. As a consequence of this unrest the Danish krone also came under pressure in August and September, cf. p. 39ff., but strengthened again in the 4th quarter. At the beginning of 1999 the Norwegian krone and Swedish krona also appreciated.

The exchange rates of emerging economies fluctuated considerably in 1998, cf. Charts 24 and 25. With the exception of the Indonesian rupiah, the *Southeast Asian* currencies rose against the dollar in 1998. The Korean won and the Thai baht thus appreciated by respectively 33 per cent and 28 per cent against the dollar. The Indonesian rupiah depreciated by 32 per cent during the year, but in mid-year had weakened by 68 per cent from the beginning of the year as a consequence of social unrest, etc. The restructuring of private-sector foreign debt and the implementation of reforms are part of the explanation for the strengthening of most of these currencies. The yen's appreciation against the dollar in the second half-year also contributed.

During the last 5 months of the year the *Russian* rouble fell dramatically after Russia abandoned the pegging of the rouble to the dollar. The rouble depreciated by 71 per cent over the year, cf. Chart 25.

The crisis in Russia led to increased pressure on the *Latin American* currencies and weakened e.g. the Mexican peso, cf. Chart 24. The Brazilian real likewise came under serious pressure, but as a con-

sequence of e.g. the adoption of a relatively tight budget and an IMF-coordinated loan, cf. p. 91, it was kept within the exchange-rate corridor against the dollar. However, defence of the exchange rate was abandoned in January 1999 and in the course of a few weeks the real depreciated by 41 per cent, cf. Chart 25.

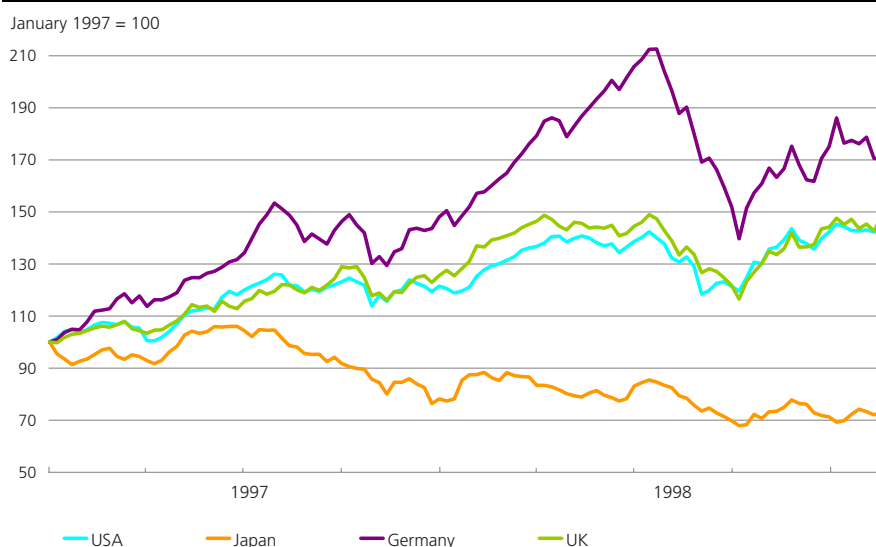
STOCK MARKETS

In the first half of the year equity prices rose, cf. Chart 26. Up to mid-July the US Dow Jones index and the German Dax index rose by respectively 18 per cent and 45 per cent. The positive development on the stock markets was attributable to very low interest-rate levels and to expectations that restructuring measures and cost savings would maintain earnings levels. The development on the stock markets in the USA and Europe contrasted sharply with the situation in Japan where equity prices fell as a consequence of the continued deterioration in the economy and the severe situation in the financial sector.

In August and September global stock markets saw strong price drops in reaction to the financial unrest following on the Russian crisis. In the USA and Germany shares fell to a level respectively 5 per cent and 8 per cent below the year's starting level. The drop in equity prices was especially pronounced for emerging markets, cf. Chart 27. In the 4th quarter of the year the falling equity prices reversed to increases. US and

SHARE INDICES IN MAJOR INDUSTRIALISED COUNTRIES

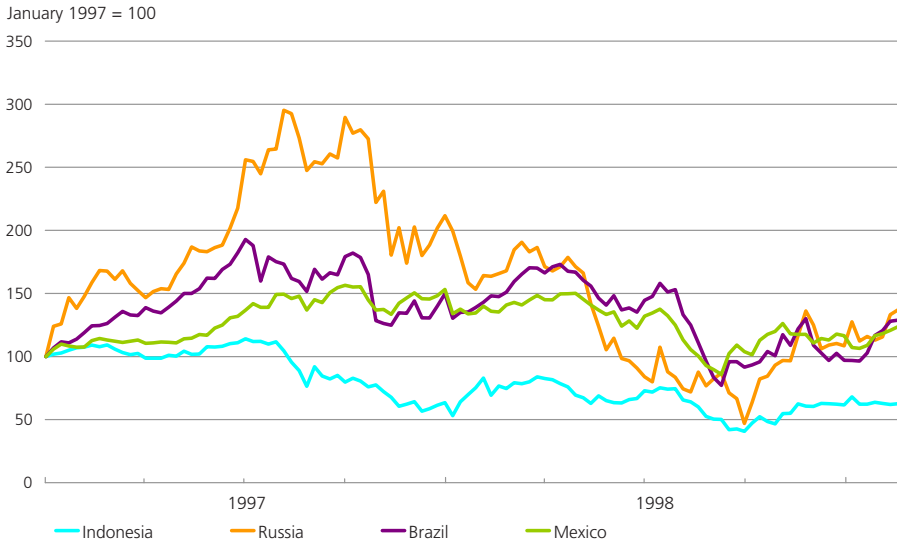
Chart 26



Note: Weekly observations.

SHARE INDICES IN SELECTED EMERGING MARKETS

Chart 27



Note: Weekly observations.

German shares closed the year respectively 16 and 18 per cent higher. The turnaround in the final quarter of the year can be attributed to a reduced risk of a serious global dampening of growth as well as a number of major corporate acquisitions and mergers which led to expectations of further acquisitions at prices above current market values.

The Domestic Financial System

In 1998 the minimum coupon rate was maintained at 4 per cent. As in 1997, 4-per-cent bonds for large amounts were issued. Mortgage-credit bonds for kr. 245 billion were converted, compared to kr. 260 billion in 1994, which was the last major conversion year.

The banks' total profit for the year rose to kr. 14 billion. Provisions and losses on debtors increased moderately and the provision ratio remained unchanged. The mortgage-credit institutes are expected to achieve a favourable annual result for the 4th consecutive year.

THE BOND MARKET

Bond yields declined in 1998, except for the periods around the referendum on the Amsterdam Treaty in May and the turbulence on the international capital markets in August and September. The low interest rates made it attractive for home owners to convert their mortgage-credit loans. In 1998 mortgage-credit bonds for kr. 245 billion were redeemed prematurely, compared to kr. 260 billion in 1994, the last major conversion year.

The *outstanding volume of krone-denominated bonds* listed on the Copenhagen Stock Exchange rose in 1998 from a nominal amount of kr. 1,797 billion to kr. 1,876 billion. This net supply can be attributed to mortgage-credit bonds and other bonds, since the outstanding volume of government securities fell by kr. 10 billion.

The *minimum coupon rate* was maintained at 4 per cent in 1998 and is likewise fixed at 4 per cent for the first half of 1999. As in the previous year issues of 4-per-cent bonds were substantial. In 1998 the net supply of 4-per-cent bonds was around kr. 60 billion.

Non-resident investors acquired krone-denominated bonds for a net amount of kr. 2 billion in 1998. Their portfolios still mainly comprise government securities, although demand for mortgage-credit securities has been rising. Net purchases of mortgage-credit bonds by non-residents thus amounted to kr. 25 billion, while they resold government bonds for a net amount of kr. 26 billion.

In the 1999 Finance Act a measure was adopted to abolish the exemption from real-interest tax of yields on newly-issued *index-linked bonds*. This amendment entails that the obligation to finance subsidised

housing by issuing index-linked bonds has lapsed. Issues of index-linked bonds will therefore decline considerably.¹

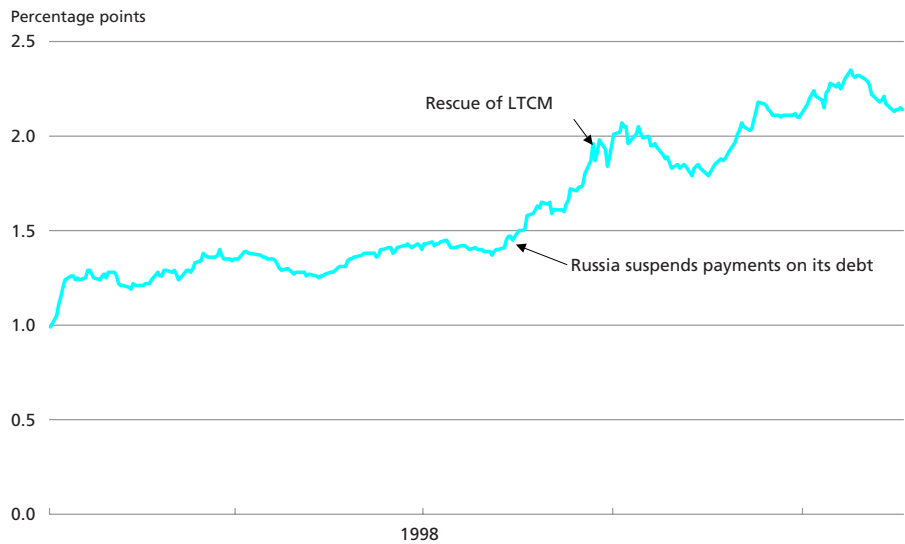
An innovation in the bond market was the issue of mortgage-credit bonds denominated in euro (up to 1 January 1999 in ECU).

The LTCM crisis

The Danish mortgage-credit market was affected significantly by the turbulence on the financial markets in the autumn of 1998, when demand for safe, liquid government bonds from the industrialised countries rose, leading to a significant decline in international bond yields. In Denmark too, investors' increased aversion to risk led to a significant widening of the yield differential between mortgage-credit and government bonds, cf. Chart 28.

The yield differential widened further in September 1998 when the US hedge fund, Long Term Capital Management, LTCM, was on the brink of bankruptcy, cf. p. 52ff. LTCM and other investors had also taken positions in the Danish mortgage-credit market. This led to concern that resales of mortgage-credit bonds might have a strong impact on price formation. From September to November non-residents resold mortgage-credit bonds for a net amount of kr. 25 billion. In December non-residents repurchased mortgage-credit bonds for net kr. 6 billion.

YIELD DIFFERENTIAL BETWEEN THE MORTGAGE-CREDIT BOND 6 PER CENT 2029 AND THE GOVERNMENT BOND 7 PER CENT 2007 Chart 28



¹ Cf. Jens Verner Andersen and Jacob Gyntelberg, "Index-Linked Mortgage Bonds", Danmarks Nationalbank, *Monetary Review* – 1st Quarter 1999.

THE EFFECTS OF THE WHITSUN PACKAGE ON THE CAPITAL MARKET

As a measure to stimulate savings, before the summer break the Folketing (Parliament) adopted the Whitsun package of economic measures which contained a number of legislative amendments in the taxation area. The amendments to taxation of pension savings are of particular significance to the capital market since the real-interest tax is replaced by a new tax on pension returns:¹

- On valuation of the taxation basis the previous realisation principle is replaced by mark-to-market.
- The variable real-interest-tax rate is replaced by a fixed capital-yield tax of 26 per cent.
- A tax of 5 per cent on equity returns is introduced.
- The ceiling for equity investments is raised to 50 per cent.

A committee has been appointed under the Ministry of Economic Affairs to investigate how portfolios are to be marked to market in practice.

The new Act on Taxation of Yields on Pension Savings is expected to contribute to improving the efficiency of the bond market. In some periods the real-interest tax has dampened the trading volume of bonds, making price formation less efficient. This inappropriate effect will disappear once the new taxation structure comes into force.

The transition to compilation of the taxation basis at market value means that in future bonds and derivatives will be taxed according to the same principle. This will remove a tax-related barrier to institutional investors' use of derivatives in their portfolio management.

The raising of the equity investment ceiling is an immediate incentive to increase investment in shares. The overall effect of the Whitsun package on the proportion of shares in institutional investors' portfolios can, however, not be determined clearly, since several counterbalancing effects are involved.

Valuing the taxation basis according to the realisation principle instead of by mark-to-market entails that changes in the level of interest rates and in share prices will have a direct impact on tax revenues. This implies that central-government revenue is more sensitive than before to fluctuations in stock-exchange prices.

¹ The effects of the Whitsun package are described in more detail in Leif Lybecker Eskesen, Suzanne Hyldahl and Birgitte Sogaard Jensen, "Amended Taxation of Pension Savings", Danmarks Nationalbank, *Monetary Review* – 4th Quarter 1998.

MEASURES IN THE STOCK-EXCHANGE AREA

Nordic stock-exchange cooperation

In June 1997 the Copenhagen Stock Exchange and the Stockholm Stock Exchange initiated formalised cooperation, NOREX, with the purpose of establishing a joint Nordic securities market. Pursuant to this the two stock exchanges at the beginning of 1998 established a joint company, Nordic Exchanges A/S, whose primary task is to market NOREX to the rest of the world. As a consequence of this cooperation the Copenhagen Stock Exchange will introduce the Swedish trading system SAX 2000 for stock trading. The system is expected to be implemented in the 2nd quarter of 1999. In SAX 2000 a bond-trading system can also be developed. The Copenhagen Stock Exchange will select a system for trading of bonds in Denmark.

The securities depositories in Denmark (VP), Sweden (VPC) and Norway (VPS) have initiated cooperation to support closer Nordic partnership in the stock-exchange area and in preparation for future wider European cooperation. Danmarks Nationalbank, Sveriges Riksbank and Norges Bank are together analysing how the central banks can support this initiative.

In the short term VP and VPC establish safekeeping depots with each other, whereby Danish investors can deposit Swedish securities in VP, and vice versa. Danmarks Nationalbank and Sveriges Riksbank support the exchange of periodic payments (interest, redemptions and dividends) on securities deposited with the securities centres.

In the longer term, the intention is to create a joint Nordic clearing and settlement system, S4 (Scandinavian Securities Settlement System). Under this system a participant will need only one connection to be linked up to the entire Nordic market. S4 participants may also be other countries besides the Nordic countries.

In mid-1998 the Nordic Council of Ministers took the initiative to investigate opportunities for closer Nordic cooperation in the securities area. The work concentrates on comparing the different regulatory frameworks. The aim is to assess the need for possible adjustment or harmonisation of the rules in order to strengthen the Nordic markets' international competitive position. No evaluation of business issues is made, since this is left to the market participants. The work is expected to be concluded in the first half of 1999.

European stock-exchange cooperation

In 1998 agreements were reached on closer cooperation between stock exchanges in many European countries. This is a consequence of several

factors, particularly economies of scale and the introduction of the euro. Most significant is the agreement between the stock exchanges in Frankfurt and London on establishing a joint trading system for the largest European companies. In November 1998 the Helsinki Stock Exchange announced that it had initiated negotiations on establishing closer ties with the Frankfurt Stock Exchange. This will among other things entail that the Finnish stock exchange will use the German trading system Xetra.

THE BANKS

The economic upswing of recent years is reflected in the banks' financial results. In 1998 the banks presented a sound *surplus* for the fourth consecutive year. The profit before tax was kr. 14 billion, which is an increase of kr. 1 billion against 1997.

Non-interest-based income has gained significance in step with the narrowing of the interest margin and the introduction of fees. This trend continued in 1998. Net income from fees rose by 18 per cent. A significant proportion can be attributed to the conversion of mortgage-credit loans and to capital management. The development towards earnings less dependent on interest means that net income from fees now constitutes around one fourth of the total net income from interest and fees, against only approximately 15 per cent at the beginning of the 1990s.

The banks' *losses and provisions on debtors* showed a moderate increase in 1998.

In December the Folketing (Parliament) adopted an act which continues the previous practice allowing banks and mortgage-credit institutes among others to base the calculation of taxable income on accounting provisions, and not solely on provisions for irrecoverable losses.

Danmarks Nationalbank has attached considerable importance to accounting provisions being used to value the taxation basis, since this gives the banks a clear incentive to make the required provisions.

Structural changes

The narrowing of the interest margin has caused the banks to increasingly widen their business scope with new products. During the past year a number of banks gave greater priority to areas such as capital management and securities trading.

During the year Danish banks furthermore intensified the fight for market shares in the Nordic market.

Structural changes also took place within the borders of Denmark. BG Bank and Realkredit Danmark formed a joint holding company, Kapital Holding. This amalgamation required amendment of the Danish Commercial Banks and Savings Banks Act, so that the requirement of limitation of voting rights for savings banks lapses five years after the restructuring.

Banking can be generally described as a very information-intensive activity. A large proportion of the functions performed by the banks is based on collecting, storing, processing, selling and distributing information. The sector is therefore strongly influenced by the rapid development of modern information technology. This will affect the supply of financial services and the way in which services are provided and distributed. In recent years the Internet, for example, has become important to banks' marketing and distribution activities.

Electronic money, e.g. the Danmønt prepaid card, is another example of changes in the wake of technological progress. In global terms, electronic money is still only issued on a very limited scale, and within Europe mainly by banks. In 1998 the European Commission proposed rules for other issuers of electronic money besides banks¹. The Nationalbank has expressed its support in principle for the proposal, which takes into account that issuers of electronic money usually have a very different balance-sheet structure to that of banks.

THE MORTGAGE-CREDIT INSTITUTES

In 1998 the mortgage-credit sector is expected to present a favourable financial result for the fourth consecutive year². Lending rose by a considerable 8 per cent and conversion activity in 1998 was almost as high as during the conversion wave in 1994.

The new bank-owned mortgage-credit institutes again in 1998 acquired market shares from the old mortgage-credit institutes³. This applies in particular to the market for loans to private home owners. In 1998 the new mortgage-credit institutes accounted for almost 80 per cent of net new lending⁴ for owner-occupied homes and summer cottages, cf. Chart 29. Due to the banks' traditionally close contact with

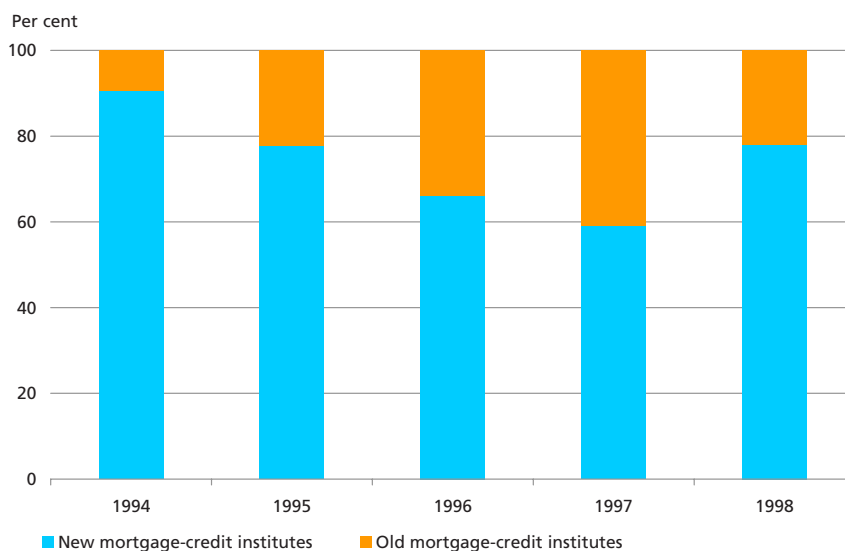
¹ The directive proposal is described in more detail on p. 140f, and in Christian Thygesen and Mogens Kruse, "Electronic Money", Danmarks Nationalbank, *Monetary Review* – 4th Quarter 1998.

² At the time of going to press not all mortgage-credit institutes had published their annual accounts for 1998.

³ By "old" institutes is meant Nykredit, Realkredit Danmark and BRFKredit. "New" institutes are Totalkredit, Danske Kredit, Unikredit, FIH Realkredit, LRF, and from 1998 BG Kredit.

⁴ Net new lending is gross new lending less premature redemptions. This eliminates conversions from gross new lending, and net new lending solely comprises the new loans not raised as part of a loan conversion.

NET NEW LENDING FOR OWNER-OCCUPIED HOMES AND SUMMER COTTAGES Chart 29



Note: Reported to Danmarks Nationalbank. Net new lending is calculated as gross new lending less premature redemptions.

customers the new mortgage-credit institutes were able to use the many conversions to take over the customers' mortgage-credit loans.

Taken as one, the new mortgage-credit institutes saw an increase in total lending by kr. 52 billion in 1998, while the increase in lending by the old mortgage-credit institutes was kr. 27 billion. The new mortgage-credit institutes' share of total outstanding loans thus rose to 20 per cent in 1998, against 16 per cent in 1997.

The conversion activity of respectively new and old mortgage-credit institutes can be illustrated by relating the conversions in a mortgage-credit institute to the mortgage-credit institute's gross new lending¹. In 1998 conversions accounted for 58 per cent of the gross new lending of the old mortgage-credit institutes, while the equivalent figure for the new mortgage-credit institutes was 44 per cent. The activity of the old mortgage-credit institutes was thus to a greater degree characterised by conversions of existing customer loans, while the new mortgage-credit institutes gained a greater share of the new customers in 1998.

The conversion activity can also be illustrated by extraordinary redemptions as a ratio of the circulating volume of conversion-ready bonds. Here there is a tendency for the new mortgage-credit institutes to have a slightly higher redemption ratio than the old mortgage-credit institutes.

¹ The analysis of conversion activity does not include FIH Realkredit and LRF.

The structural development in the mortgage-credit sector has entailed that especially old mortgage-credit institutes seek to offer all types of financial services. It is sought to realise this strategy either by mergers, acquisitions or cooperation with other financial enterprises.

Several mortgage-credit institutes have introduced euro-denominated loans, including loans with interest-rate adjustment. According to the mortgage-credit institutes, euro-denominated loans are intended primarily for business enterprises which have euro-denominated revenues.

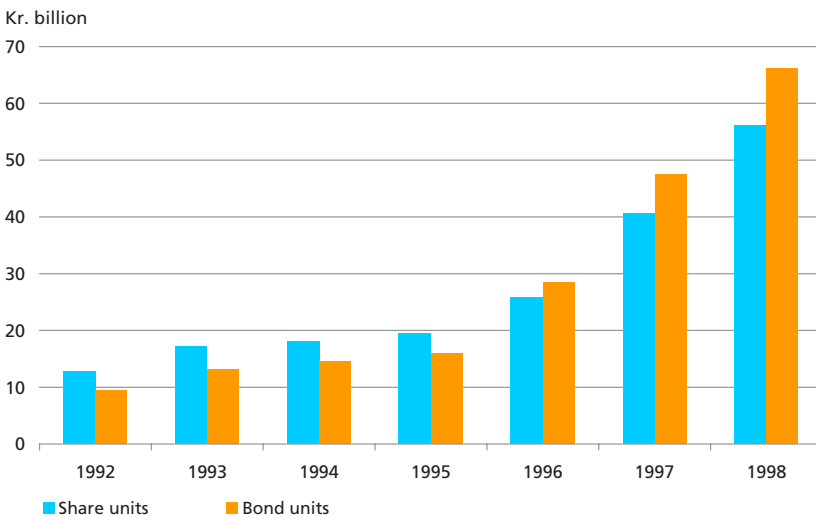
THE INVESTMENT ASSOCIATIONS

The number of investment associations and their assets have increased significantly in the past three years. The low level of interest rates has served as an incentive to many savers to seek alternative placement opportunities to e.g. bank deposits. At the same time, price increases on the bond and share markets have contributed to growth in the investment associations' total assets. The total assets of investment associations thus rose by kr. 34 billion to kr. 124 billion in 1998. Nominal sales of new certificates were kr. 29 billion, while capital gains on the investment associations' securities, etc. amounted to kr. 5 billion.

In the 3rd quarter the market value of several share certificates fell by around 20 per cent, but prices rallied in part towards the end of the year. Investment associations based on European equity securities

ASSETS OF INVESTMENT ASSOCIATIONS

Chart 30



Source: The Investment Associations Council.

achieved a return of around 21 per cent, while investment associations based on Danish equity securities typically saw a drop of 4 per cent. Investment associations based on debt securities typically rose by 5-8 per cent. Bond units in particular have attracted investors in recent years, cf. Chart 30.

VB FINANS AND HIMMERLANDSBANKEN

At the end of 1993 the Nationalbank made available a government-guaranteed overdraft of maximum kr. 4.4 billion to VB Finans, the company responsible for the winding-up of Varde Bank. As described in the 1996 Annual Report, p. 54f, at the beginning of 1996 bankruptcy proceedings were instigated against VB Finans, at the request of its Board of Directors. VB Finans af 1996, which in connection with the winding-up took over all of VB Finans' assets and certain liabilities, including the Nationalbank's overdraft facility, worked throughout 1998 on winding up the activities of Varde Bank.

During 1998 the company was able to pay approximately kr. 0.2 billion to the Nationalbank as a consequence of the winding-up of exposures, sale of properties and divestment of shareholdings. The company's total debt to the Nationalbank has thus been virtually halved from almost kr. 0.4 billion at the beginning of the year to just below kr. 0.2 billion at year-end.

The accelerated winding-up meant that the Board of Directors of VB Finans af 1996 A/S could stand down in 1998. The winding-up is thus now to a great extent equivalent to ordinary estate administration by the trustees. The company still holds a number of assets to be wound up. The ongoing winding-up of the company first and foremost concerns a number of court cases filed against the winding-up estate. It is still not possible to calculate the total costs of the winding-up of Varde Bank.

In 1998 no amounts were disbursed under the guarantee provided by the Nationalbank and a number of banks to the winding-up estate of Himmerlandsbanken, cf. the 1993 Annual Report, p. 48ff. Final calculation of the costs of the winding-up of Himmerlandsbanken awaits the outcome of court cases filed against the estate.

Banknotes and Coins

Danmarks Nationalbank issued a new 1,000-krone note in 1998. A new 50-krone note is issued on 7 May 1999. The new banknote series will be completed with a new 100-krone note at the end of 1999.

In 1998 notes in circulation increased by 6.1 per cent. The 200- and 500-krone notes account for the greatest increase.

Four cash depots were established in the Copenhagen area in 1998.

THE NEW BANKNOTE SERIES

On 18 September 1998 Danmarks Nationalbank issued a new 1,000-krone note. It is the third note in the new series. The 200-krone and 500-krone notes were issued in 1997, cf. the 1997 Annual Report, p. 60. Old 1,000-krone notes will continue to be legal tender, but are withdrawn as they are returned to the Nationalbank.

For the first time on a Danish banknote, the face of the 1,000-krone note features a double portrait. It shows the Skagen (Skaw) painters Anna and Michael Ancher. They are both recognised for their works depicting e.g. everyday life at Skagen. The double portrait is inspired by two paintings by P.S. Krøyer in 1884. The tournament scene on the reverse is inspired by a Roman stone relief from a stone monument at Bislev Church near Nibe.

The old banknote series is being replaced because advances in graphic technology have created a need to protect banknotes better against counterfeiting. The new banknote series incorporates a number of new security features, e.g. a window thread with colour change, a hidden image and strong colours, as well as improved versions of traditional security features such as a watermark and a hidden security thread.

On the issue of the new 1,000-krone note, as on previous occasions a press conference was held, a folder was distributed to all households, and information spots were broadcast on television. A new feature was that the banknote was presented on the Nationalbank's Internet website.

So far the costs of presenting the new banknote series to the general public total approximately kr. 15 million. The 50-krone note is issued on 7 May 1999 and the series concludes with the 100-krone note at the end of 1999.



The designer of the Note Printing Works, Johan Alkjær, created the overall design together with the Originals Department of the Note Printing Works.

COUNTERFEITING OF BANKNOTES AND COINS

Each year from 1993 to 1996 approximately 100 counterfeit banknotes were found to be in circulation, but in 1997 the number increased to 365, and in 1998 to 695. Nonetheless, counterfeiting is not widespread in Denmark. The number of counterfeit banknotes confiscated before they get into circulation varies considerably from year to year. The old banknote series is being replaced, as described above, in order to protect banknotes better against counterfeiting.

Counterfeiting of notes and coins, or attempted counterfeiting, is a serious crime which can incur a penalty under the Danish Penal Code. The maximum penalty is a prison sentence of 12 years, which is one of the most severe maximum penalties stipulated in the Danish Penal Code. Photocopying banknotes for innocent purposes may also be a breach of the Penal Code.

BANKNOTES AND COINS IN CIRCULATION

Note circulation

In 1998 notes in circulation increased by kr. 2.1 billion to kr. 36.8 billion, or by 6.1 per cent. The rate of increase is generally equivalent to the previous years. The number of banknotes in circulation rose by 4.8 million, cf. Table 6.

Part of the increase in the note circulation can be attributed to the reorganisation of the cash supply system, whereby four cash depots were established in Copenhagen in the spring of 1998. Later in the year their operating scope was extended to include Zealand, cf. p. 71f.

The circulation of 200- and 500-krone notes accounts for the greatest increase. The circulation of 100-krone notes continued to decline in 1998 after the introduction of the 200-krone note in 1997. Nonetheless, in quantitative terms 100-krone notes account for the largest share of the note circulation, i.e. 48 per cent. On the other hand, the value of circulating 100-krone notes constitutes only 16 per cent of the note circulation, against 54 per cent in the case of 1,000-krone notes.

NOTE CIRCULATION

Table 6

	Circulation, end of year			Increase in circulation			Issue of new banknotes ¹⁾		
	1996	1997	1998	1996	1997	1998	1996	1997	1998
Number in millions, value in kr. billion									
1000-krone notes									
Number	19.3	19.6	19.8	1.0	0.3	0.2	3.0	1.7	10.6 ²⁾
Value	19.3	19.6	19.8	1.0	0.3	0.2	3.0	1.7	10.6
500-krone notes									
Number	11.6	13.1	16.2	1.0	1.5	3.1	2.9	13.0 ²⁾	3.7
Value	5.8	6.6	8.1	0.5	0.7	1.5	1.4	6.5	1.9
200-krone notes									
Number	•	8.1	10.9	•	8.1	2.8	•	12.5 ²⁾	4.2
Value	•	1.6	2.2	•	1.6	0.6	•	2.5	0.8
100-krone notes									
Number	69.3	61.2	58.8	1.7	-8.1	-2.4	35.6	20.5	21.1
Value	6.9	6.1	5.9	0.2	-0.8	-0.2	3.6	2.0	2.1
50-krone notes									
Number	15.6	16.0	17.0	0.8	0.4	1.1	16.0	17.7	13.2
Value	0.8	0.8	0.9	0.0	0.0	0.1	0.8	0.9	0.7
Total									
Number	115.7	118.0	122.7	4.6	2.2	4.8	57.5	65.5	52.9
Value	32.8	34.7	36.8	1.8	1.9	2.1	8.8	13.7	16.1

Note: Excluding withdrawn 5-, 10- and 20-krone banknotes and Faroese banknotes. The circulation includes cash depots.

¹⁾ Replacement of worn banknotes and increase in the banknote circulation.

²⁾ The increase in the issue of new banknotes is due to the issue of new 200-, 500-, and 1,000-krone banknotes.

CIRCULATION, PRODUCTION AND WITHDRAWAL OF COINS IN 1998

Table 7

	Coin circulation	Minted by the Royal Mint		Withdrawn	
	Kr. million	1,000 coins	Kr. 1,000	1,000 coins	Kr. 1,000
200-krone, silver	65				
20-krone	1,371	3,974	79,489	72	1,440
10-krone	813	6,003	60,026	120	1,200
5-krone	504	6,446	32,231	288	1,440
2-krone	348	4,360	8,720	60	120
1-krone	413	13,078	13,078	2,700	2,700
50-øre	134	13,117	6,559		
25-øre	169	17,204	4,301		
Total.....	3,816	64,182	204,403	3,240	6,900

The lifetime of a banknote normally increases with the note's denomination because the turnover rate for lower note denominations exceeds that for the higher denominations, so that the lower denominations wear out more quickly. The lifetime of a 50-krone note is typically around one year, whereas the lifetime of a 1,000-krone note is approximately three years. The lifetime of the banknotes is affected by the introduction of the new banknote series, however. In the period up to the issue of the new series of banknotes the production of the banknotes to be replaced is reduced. Instead, old banknotes of a slightly poorer quality than normal are put back into circulation. The average lifetime of the banknotes is thus extended. After the issue of a new banknote series the old notes are withdrawn as they are returned to the Nationalbank. This also applies to banknotes of good quality, thereby shortening the average lifetime of the banknotes.

Pursuant to the Nationalbank Act of 1936 the circulation of banknotes must be covered by the Nationalbank's reserves of gold and other assets. Since 1939 an exemption has been made from the gold-coverage provision.

Coin circulation

In 1998 the coin circulation increased by 5.1 per cent to kr. 3,816 million. The 20-krone coin accounted for the largest increase by value, whereas the 25-øre coin showed the largest increase in quantitative terms.

Table 7 shows the distribution of the coin circulation and coin production on the various coin denominations.

REORGANISATION OF THE CASH SUPPLY SYSTEM

In 1990 the first cash depots were established with the purpose of supplying the local banks and post offices with cash or taking back their

surplus cash holdings. Cash was supplied from 18 depots all over Denmark, except Copenhagen/Zealand where the Nationalbank has administered the cash supply directly.

A number of adjustments to the cash supply system began in 1998. The background was certain issues of principle concerning the distribution of tasks between the Nationalbank and the banks. A further consideration was to continuously ensure effective planning of the cash supply and to limit the number of cash transports, cf. Monetary Review - 3rd Quarter 1998, p. 18.

In March 1998 four cash depots were therefore established in Greater Copenhagen. From October they also took over the supply of banknotes to all banks on Zealand. Up to the end of 1998 the banks could still order notes from and deposit notes with the Nationalbank.

As of 1 January 1999 the Nationalbank's role in the cash supply system is by and large limited to paying out new banknotes and receiving banknotes for destruction. The Nationalbank now only supplies the cash depots with banknotes, while until further the banks may order coins from and deposit coins with the Nationalbank. The sorting and recirculation of reusable banknotes is thus transferred from the Nationalbank to the banks.

The Nationalbank monitors the development in the quality of the circulating banknotes, by sorting banknotes for destruction and by random control of the notes stored in the cash depots, where quality control of notes for both recirculation and destruction is performed.

In order to create an incentive for the coin circulation also to be taken over by the cash depots a charge per coin roll (coins are packaged in rolls) has been introduced. The charge is the same for the cash depots and the Nationalbank.

Payment Systems

In 1998 the infrastructure behind the joint European payment system, TARGET, was finalised. TARGET came into force on 1 January 1999 on the introduction of the euro. The infrastructure behind the real-time gross-settlement system DEBES (the Danish part of TARGET), the correspondent central bank model for cross-border provision of collateral, and the possibility of euro-denominated settlement in the Danish Securities Centre were also realised in 1998.

There are prospects of further internationalisation of the infrastructure, including potential Nordic cooperation on settlement of securities, and the establishment of global cooperation between the largest banks in order to reduce the settlement risk on foreign-exchange trading.

THE DEVELOPMENT IN THE DANISH PAYMENT SYSTEMS

Discontinuation of the uncollateralised overdraft facility

The banks' access to uncollateralised intraday credit from the Nationalbank has been gradually phased out since 1995.

This discontinuation makes high demands of the banks' intraday liquidity management. In 1995 the Nationalbank therefore announced a long transition period to allow the banks to adjust to the new situation. The last remaining elements of the uncollateralised credit facility with the Nationalbank were dismantled at the end of September 1998. The Nationalbank is thus now in line with the other EU central banks, which all only offer intraday credit against collateral.

Collateral right

In connection with the transition to intraday credit against full provision of collateral the use of collateral has been made more flexible. A new function, *the collateral right*, has been developed in the Danish Securities Centre, VP. The function presents two advantages in relation to ordinary pledging of collateral whereby a pledged paper may not be traded again until the loan is redeemed. With the collateral right it is not the individual paper, but the collateral-right account as such which determines the size of a bank's allowed overdraft. For as long as the account has a value exceeding the overdraft the bank may freely transfer securities to and from the account. If the overdraft is not

redeemed in due time, the lender (the Nationalbank) may transfer the pledged assets to its own account. Moreover, the banks may already use purchased securities as collateral in the settlement run during which the securities are transferred. In the case of ordinary pledging to the Nationalbank the securities may not be used as collateral until they have been transferred. The banks thus achieve a substantial liquidity saving.

It was the original plan that the collateral right would come into force before the end of 1996, but problems with its implementation led to postponement until 30 July 1998. Besides Denmark only France has a scheme similar to the collateral-right system.

EURO-DENOMINATED PAYMENT SYSTEMS IN DENMARK

Non-euro area member states may be connected to the joint European payment system, TARGET¹. In cooperation with the financial sector the Nationalbank has therefore built up a payment structure for euro. Systems have also been established for euro-denominated settlement of securities and retail payments.

TARGET

TARGET is a real-time gross-settlement system (RTGS), cf. Box 4, which allows large euro-denominated amounts to be transferred rapidly and safely within the euro area. TARGET came into force on 1 January 1999. In addition to monetary-policy transactions TARGET may be used for commercial transfers between banks within the EU. TARGET is based on national RTGS systems which are interlinked across national borders. The Danish part of TARGET is called DEBES, Danmarks Euro BEtalingsSystem. The Nationalbank has discussed the design of the system on an ongoing basis with representatives of the banks.

A total of 34 banks have registered as direct DEBES participants, while around 70 have registered as indirect participants. To be a direct participant a bank is required to hold a euro-denominated main account with the Nationalbank. Indirect participants do not themselves hold main accounts with the Nationalbank, but send and receive funds via a direct participant. At EU level more than 5,000 banks are direct participants and around 40,000 are indirect participants in TARGET. It is thus possible to transmit euro-denominated payments via TARGET to most banks within the EU.

¹ A more detailed description of TARGET and the Danish part of TARGET, DEBES, is given in Thomas Angelius, Søren Lundsby Hansen and Jesper Mærsk: "DEBES – The Danish Part of TARGET", cf. Danmarks Nationalbank, *Monetary Review* - 2nd Quarter 1998.

TYPES OF PAYMENT SYSTEMS

Box 4

Payment systems for transfer of funds between banks can be divided into two categories: real-time gross-settlement systems and net settlement systems.

In a real-time gross-settlement system (RTGS) the banks send their payment orders to e.g. the Nationalbank on a continuous basis. Each payment is settled immediately and finally via the banks' accounts with the Nationalbank.

In a net settlement system the banks on an ongoing basis send their payment orders to a clearing centre (e.g. PBS or VP). One or several times a day the latter calculates the net position of each bank. The banks then settle their accounts, e.g. via accounts with the Nationalbank.

There are both advantages and drawbacks in both systems. In a net settlement system the payments are not final until clearing and settlement have taken place. On the other hand, the liquidity requirement and thereby costs are higher in a gross-settlement system. A bank which in the course of one day is to send and receive three payments each of kr. 50 million will have no liquidity requirement in a net system, whereas in a gross system it might require up to kr. 150 million.

In Denmark as of 4 January 1999 there are two real-time gross-settlement systems: DEBES in euro and the DN Inquiry and Transfer System in kroner. The retail clearing (settlement of retail payments, including cheques and Dankort) is an example of a net settlement system.

The fees for using DEBES are fixed so as to cover all costs. A further requirement was that the system would be available for widespread use. The fee structure therefore includes a connection fee and a monthly charge which both increase with the size of the bank, as well as transaction fees, which are the same for all participants.

The fee for cross-border TARGET transactions declines with the number of transactions. The fee for the first 100 transactions per month is 1.75 euro, for the next 900 transactions 1 euro, and for the following transactions 0.80 euro.

TARGET will be open daily from 7.00 a.m. to 6.00 p.m., except weekends, Christmas Day and New Year's Day. The long opening hours ensure that the system is open concurrently with payment systems in e.g. the USA and Japan. This can help to reduce the settlement risk on foreign-exchange trading, cf. Box 5.

It is difficult to estimate the scale on which TARGET will be used in the future. In addition to monetary-policy transactions and settlement of various net systems in euro, the central banks wish the system to be used for large payments. Smaller payments are best made via the net systems, as is also the case at national level.

TARGET terms for non-euro area member states

EU member states outside the euro area participate in TARGET on more restrictive terms than the euro area member states. While euro-area participants have access to unlimited intraday liquidity against provision of collateral, participants from the non-euro area member states may only obtain liquidity on the basis of deposits by the country's central bank to a central bank in the euro area. The Nationalbank therefore before 8.00 a.m. each morning deposits 1 billion euro with a central bank in the euro area. This deposit is withdrawn at around 5.00 p.m. each evening. There is thus an upper limit of 1 billion euro to the liquidity which can be made available to the Danish participants within one day. If the banks' total liquidity requirement exceeds 1 billion euro the Nationalbank distributes the liquidity to the participants according to the same distribution key as is used for the connection fee and the monthly charges. The costs of the deposits are collected from the Danish participants and distributed on the banks in proportion to the liquidity they receive. For the 1st quarter of 1999 the costs are fixed at 0.08 per cent p.a.

Furthermore, after 5.00 p.m. non-euro area member states may only transact payments on the basis of a positive balance. In case of failure to cover an overdraft by 5.00 p.m. the participant must pay an interest premium to the Nationalbank. If the overdraft is not covered by 6.00 p.m. the participant must pay a further interest premium to the Nationalbank and the ECB. Apart from the interest premium to the ECB this generally corresponds to the practice in the Nationalbank's krone-denominated payment system, and is not expected to present problems for the Danish participants. Overall the terms for Danish banks' participation are acceptable.

The Nationalbank uses government bonds and mortgage-credit bonds as the collateral basis for both euro-denominated intraday credit and for krone-denominated credit. For technical reasons it is not possible to use certificates of deposit as collateral for euro-denominated credit. In order to cover the market-value risk it has been determined that the value of the collateral must exceed the amount of the loan by at least 3 per cent.

The correspondent central bank model

In order to facilitate the provision of collateral in e.g. TARGET the EU central banks and the ECB have built up the correspondent central bank model (CCBM) for cross-border provision of collateral. The principle is that the central banks will not extend credit of any kind without collateral. Cross-border collateral is provided by the central banks acting

as each other's correspondent banks. A bank within the EU may use securities placed in another EU member state as collateral vis-à-vis its national central bank. A bank in Germany requiring credit from the Bundesbank may e.g. deposit securities held in the Netherlands to a safekeeping account with the Dutch central bank. The latter informs the Bundesbank that it holds the securities, and the Bundesbank then provides the credit to the German bank.

Danish banks with branches in a participating country may obtain euro-denominated liquidity against Danish securities as collateral, provided that the Danish securities are accepted as collateral. The central banks of France, the Netherlands, Finland, Luxembourg and Germany have stated that they accept Danish securities.

In the longer term it is possible that cross-border intra-EU collateral will be provided by transferring securities between securities centres, cf. below concerning ECSDA.

Settlement of securities and retail payments denominated in euro

In the Danish Securities Centre euro-denominated settlement, like krone-denominated settlement, takes place at night in order to be in harmony with the settlement in the international securities centre Euroclear. Euro settlement takes place in kroner, since, as stated above, the Nationalbank may only make euro-denominated liquidity available during the day. The krone amounts are converted to euro on the following morning.

While the retail clearing on the krone side takes place at night, the euro-denominated retail clearing is settled in the morning. This gives participants time to obtain euro-denominated liquidity, and to relinquish it again. The euro-denominated retail clearing may only be used for account-to-account payments and not for PBS transfers, e.g. direct debits. The euro retail clearing is expected to be ready in May 1999.

In order to prepare participants for the new euro-denominated systems, in cooperation with VP and the Danish Bankers Association the Nationalbank has held seminars on settlement and payment systems denominated in euro. Approximately 350 people attended. Moreover, the Nationalbank has provided staff training for DEBES participants.

INTERNATIONALISATION OF THE SETTLEMENT STRUCTURE

The number of cross-border transactions has increased steadily in recent years. To support this development a number of initiatives have been taken in the securities and currency settlement areas.

Securities settlement

As described on p. 62, the securities depositories of Denmark (VP), Sweden (VPC) and Norway (VPS) have initiated cooperation to support closer Nordic cooperation in the stock-exchange area and to prepare for wider European cooperation in the future. In the longer term the vision is to create a joint Nordic clearing and settlement company called S4 (Scandinavian Securities Settlement System).

S4 will be designed to be in harmony with a future joint European securities settlement infrastructure. In the short term the cross-border provision of collateral within the EU takes place via CCBM. In the longer term the intention is for the securities depositories to establish links among themselves which are similar to those existing today between VP and Euroclear. This will be achieved via ECSDA (European Central Securities Depositories Association), which is an alternative to CCBM. Securities may be transferred between countries via ECSDA.

Settlement of foreign-exchange trading

Major changes are also being prepared in the area of currency settlement. Currency settlement and securities settlement are similar in that two different claims are exchanged. However, with regard to currency settlement there are no institutions to ensure simultaneous settlement of the two claims and thereby reduce the settlement risk. One of the problems related to foreign-exchange trading is that the exchange is often between countries in different time zones. There can therefore be a long delay between the ingoing and outgoing payments in a foreign-exchange transaction. The parties to a foreign-exchange transaction in practice hold a credit risk on each other for the period from the irrevocable release of their currency until they receive currency from the counterparty.

In July 1998 the major industrialised countries, G10, published a report on foreign-exchange trading risks¹. The report follows up on an equivalent report from 1996. In the 1996 report G10 recommended action at three levels: bank, sectoral and central-bank levels. Banks were to improve their risk management systems so as to reduce the duration of the settlement risk. The banking sector was encouraged to accelerate the establishment of clearing centres where settlement risks are limited by netting or are eliminated by PvP (Payment versus Payment), i.e. by simultaneous settlement of both legs of a foreign-exchange transaction. The central banks were to work for the RTGS systems of different countries to be open at the same time to provide for simultaneous

¹ *Reducing Foreign Exchange Settlement Risk: a Progress Report*, Basle, 1998.

CL5 BANK

Box 5

Continuous Linked Settlement, CLS, is a private bank established to reduce the risk on foreign-exchange transactions. The original initiative was taken by 20 of the world's largest commercial currency traders, but later the group of shareholders has been expanded to include approximately 60 shareholders who have each contributed \$3.5 million. Den Danske Bank and Unibank are among them. The shareholders will be the only direct participants. The system is planned to start in mid-2000 for the most liquid currencies (dollar, euro, yen and a few others). The krone will not be included until the second wave, probably around the turn of the year 2000/2001. Between one third and half of global currency trading is expected to take place via the system.

The principle behind CLS is Payment versus Payment, PvP. Both parties in a foreign-exchange transaction must pay in their part of the deal to the CLS Bank, a subsidiary of CLS. Only then will the CLS Bank exchange the payments. This avoids a bank assuming a risk before it receives the currency. A currency may only be settled in CLS if the country's RTGS system is open between 7.00 a.m. and 12.00 CET, so that payments can be exchanged. Although in principle the system is very simple, in practice it will be very complicated. This is because – to save liquidity – the deals will to a great extent be settled by netting without funds being paid in. The necessary procedures should a bank not be able to fulfil its commitments will also have to be in place.

settlement of the two legs of a foreign-exchange transaction, and the central banks were to contribute to building up international cooperation.

The 1998 report concludes that progress has been made on all fronts. Banks have improved their risk management systems. At the sectoral level a number of large banks have commenced the establishment of the CLS Bank, cf. Box 5. Finally, TARGET entails considerable opportunities for simultaneous settlement of foreign-exchange transactions via PvP.

THE FRAMEWORK FOR PAYMENT SYSTEMS¹

The Payment Card Act

In autumn 1998 the Ministry of Business and Industry submitted a draft bill to amend the Payment Card Act. The bill entails the rescinding of Section 20 of the Payment Card Act which prohibits the banks from imposing fees on retail traders for their Dankort transactions. Initially this applies only to payments via the Internet. In three years' time the banks may also impose fees on the retail sector if real competition has been established in the area.

¹ Cf. also "The Statutory Basis for the Financial Sector", p. 143f.

Further development of the payment technology will be of benefit to banks, the retail sector and consumers alike. However, Section 20 implies that some elements of the costs may not be imposed on the retail sector. To some extent this reduces the banks' incentive to develop the technology further.

The Nationalbank has traditionally supported the establishment of a common payment systems infrastructure. The common infrastructure must be regarded as a considerable advantage. The objective must therefore be a liberalisation of the Payment Card Act without at the same time destroying the core of the common infrastructure.

International Monetary Cooperation

The third stage of Economic and Monetary Union, EMU, commenced on 1 January 1999 with the adoption by 11 EU member states of the single currency, the euro. The irrevocably fixed conversion rates between the participating currencies and the euro were determined on 31 December 1998. Denmark does not participate in the single currency, but has as of 1 January 1999 participated in the new exchange-rate mechanism, ERM II. The European Central Bank, ECB, was established on 1 June 1998 and as from 1 January 1999 the ECB took over responsibility for monetary policy in the euro area from the central banks of the 11 participating member states.

In 1998 the work of the International Monetary Fund, IMF, was characterised by efforts to contain the crisis which arose in the foreign-exchange and capital markets of Asia in 1997.

THE INTRODUCTION OF THE EURO

The third and final stage of Economic and Monetary Union, EMU, began on 1 January 1999 with the adoption by 11 EU member states of the single currency, the euro. The 11 euro area member states are Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland. At the same time, the European Central Bank, ECB, took up its function as central bank to the euro area in cooperation with the national central banks of the participating member states.

The irrevocable fixing of exchange rates

The 11 member states to participate in EMU were selected by the heads of state or of government of the EU member states in May 1998. At the same time the bilateral conversion rates to apply as from 1 January 1999 between the currencies of these member states were announced. On 31 December 1998 the exchange rates of the participating currencies vis-à-vis the euro were fixed irrevocably, after which the euro was born as an independent currency on 1 January 1999. As from this date the national currencies of the participating member states are sub-denominations of the euro, just as e.g. the øre is a sub-denomination of the krone. Box 6 shows the irrevocably fixed conversion rates.

THE IRREVOCABLY FIXED CONVERSION RATES BETWEEN THE EURO AND THE CURRENCIES OF THE PARTICIPATING EU MEMBER STATES			Box 6
1 euro =	40.3399	Belgian francs	
=	1.95583	D-marks	
=	166.386	Spanish pesetas	
=	6.55957	French francs	
=	0.787564	Irish pounds	
=	1,936.27	Italian lire	
=	40.3399	Luxembourg francs	
=	2.20371	Dutch guilder	
=	13.7603	Austrian schillings	
=	200.482	Portuguese escudos	
=	5.94573	Finnish marks	

The procedure on 31 December 1998 was determined by the requirements stipulated in the Maastricht Treaty that 1 euro be equal to 1 ECU on the introduction of the euro. This procedure began by the national central banks' calculation of the exchange rates for their national currencies, ensuring that the bilateral exchange rates between the participating countries' currencies were in accordance with the conversion rates which were pre-announced in May. The exchange rate for the official ECU was then calculated in order to fix the exchange rate for 1 euro. Against this background the Council of Ministers of Economic Affairs and Finance (ECOFIN) could adopt the irrevocably fixed conversion rates between the euro and the 11 euro area currencies as from 1 January 1999.

In the first three years the euro will exist solely as a "unit of account", i.e. as an electronic means of payment, as the denomination of securities, on price signs, etc., but not as physical money. Euro banknotes and coins will not be introduced until 1 January 2002. National banknotes and coins will continue to be in circulation as a means of payment until that date. During the following six months the national currencies will be withdrawn from circulation. As from 1 July 2002 euro banknotes and coins will be the only legal tender in the euro area.

The changeover weekend

During the changeover weekend from 1 January 1999 until the financial markets opened on 4 January the financial institutions of the euro area converted their payment systems, computer software, price quotation systems, etc. to euro. Most government bonds and many other securities

were converted to euro. Denmark and other EU member states and third countries also made adjustments, but on a smaller scale than in the participating countries. The changeover weekend and the introduction of the euro on the foreign-exchange and capital markets on 4 January 1999 progressed smoothly without any significant problems.

EU member states outside the euro area

Denmark, Greece, Sweden and the UK have not adopted the single currency. As from 1 January 1999 Denmark and Greece have linked their currencies to the euro by participating in the new exchange-rate mechanism, ERM II (cf. the section on ERM II below).

Denmark fulfils the criteria for participation in the single currency, but claimed its treaty-bound right not to participate in the third stage by way of the Edinburgh Decision of 1992 which was approved in the Danish referendum on the Maastricht Treaty in 1993. Instead, Denmark is subject to the exemptions and rules stipulated in the Maastricht Treaty for member states which do not qualify to participate in the third stage, the member states with a derogation.

The UK also claimed its treaty-bound right not to participate in the single currency. The UK is not a member state with a derogation because the Protocol on the position of the United Kingdom in the Maastricht Treaty contains several more exemptions than those applied to the derogation member states. The UK government has reserved the right for the UK to participate at a later stage if EMU functions satisfactorily and is found to be economically beneficial to the UK. The British government has stated that any such participation will be subject to a referendum.

In December 1997 the Swedish Parliament adopted the government's recommendation for Sweden not to participate in the third stage from the outset, but with an option for participation at a later stage subject to popular approval in connection with an election or a referendum. Sweden does not meet the exchange-rate criterion for participation in the single currency.

Greece wished to participate from the start, but does not yet meet the conditions.

ERM II

As from 1 January 1999 Denmark has participated in the new exchange-rate mechanism, ERM II. The fixed-exchange-rate policy has thus been continued, but now vis-à-vis the euro, cf. p. 36. The krone's central rate vis-à-vis the euro is fixed at kr. 746.038 per 100 euro, with a

fluctuation band around the central rate. The standard fluctuation band in ERM II is +/- 15 per cent. However, member states in a favourable convergence position may achieve an agreement on a narrower fluctuation band. Denmark has concluded an agreement for a fluctuation band of +/- 2.25 per cent, cf. Table 8. The Danish fluctuation band of +/- 2.25 per cent corresponds to the previous narrow band for the krone in the European Monetary System, EMS, until August 1993. The fluctuation band serves as a safety net since in practice the Nationalbank seeks to stabilise the krone within a narrower range.

The objective of ERM II is to ensure exchange-rate stability between the euro area and the non-participating member states. ERM II centres on the euro since the participating currencies have central rates against the euro, but in contrast to the previous ERM agreement no bilateral rates against each other.

Should the exchange rate of a currency participating in ERM II reach a limit in the fluctuation band, i.e. either the maximum or minimum value vis-à-vis the central rate, the ECB and the central bank in question must intervene in the foreign-exchange markets in order to hold the currency within the fluctuation band. In principle, intervention at the margins is automatic and unlimited, but can be suspended if it is in conflict with the primary objective of the ECB or of the relevant central bank. Flexible use of its interest rates by a central bank whose currency is under pressure is an important element of the set of ERM II agreements.

Certain elements of the new ERM II agreement are not stated explicitly in the old EMS agreement. This especially concerns the possibility of suspending intervention and the statement that interventions should be accompanied by other policy measures, including fiscal-policy measures. The different wording in relation to previous agreements, which in more general terms stipulated "other economic measures", reflects the gradual evolution of the ERM agreements since the first resolution of December 1978 on the establishment of the EMS.

However, in real terms there are no innovations in relation to the previous agreement. A precondition for the Bundesbank's accession to the EMS agreement was that intervention could be suspended should the primary objective of the Bundesbank be endangered. The EMS crisis in 1993 showed that this possibility existed. For a number of years it has also been widely acknowledged that intervention in the foreign-exchange market can support a fixed-exchange-rate policy, but a sound economic policy is a precondition for its success.

The principles and the main terms of ERM II are described in the resolution from the European Council in Amsterdam in June 1997. The

CENTRAL RATES AND FLUCTUATION BANDS AGAINST THE EURO IN ERM II TABLE 8

Per 100 euro	Denmark	Greece
Upper limit	kr. 762.824	40,607.5 drachma
Central rate	kr. 746.038	35,310.9 drachma
Lower limit	kr. 729.252	30,014.3 drachma

Note: Applies as of 1 January 1999.

technical guidelines are described in an agreement of 1 September 1998 between the ECB and the central banks of the non-participating EU member states¹.

The agreement on Danish participation in ERM II and the fluctuation band was concluded at the informal meeting of the ECOFIN Council on 25-27 September 1998 between the Ministers of Economic Affairs and Finance and the central-bank governors of the EU member states.

Greece also participates in ERM II. Its fluctuation band is +/- 15 per cent, cf. Table 8. Sweden and the UK do not participate in ERM II.

THE EUROPEAN CENTRAL BANK

The European Central Bank, ECB, was established on 1 June 1998. At the same time the European Monetary Institute, EMI, which handled the preparations for the ECB, was liquidated. The ECB and the national central banks together constitute the European System of Central Banks, ESCB. In principle, ESCB comprises the national central banks of all 15 EU member states, but a number of the Maastricht Treaty's provisions on ESCB concern only the ECB and the central banks of the euro area member states, also called the Eurosystem.

As from 1 January 1999 the ECB is responsible for the formulation of monetary policy and for the management of a large number of central-bank functions for the euro area. In practice these tasks are handled predominantly via the national central banks. In connection with the establishment of the ECB the 11 participating countries' central banks have paid up a capital contribution of almost 4 billion euro, while the four non-participating member states have made a considerably smaller capital contribution, cf. below.

¹ The resolution, the central-bank agreement and the communiqué are available at: www.nationalbanken.dk
The communiqué from the meeting is reprinted in Danmarks Nationalbank, *Monetary Review* – 4th Quarter 1998.

THE ECB'S EXECUTIVE BOARD, APPOINTED ON 1 JUNE 1998

Box 7

Wim Duisenberg, President of the ECB, term 8 years.

Christian Noyer, Vice President, term 4 years.

Otmar Issing, term 8 years.

Tommaso Padoa-Schioppa, term 7 years.

Eugenio Domingo Solans, term 6 years.

Sirkka Hämäläinen, term 5 years.

The organisation of the ECB

The ECB has three governing bodies: the Executive Board, the Governing Council and the General Council. The former President of the EMI, Wim Duisenberg, was elected President of the Executive Board in May 1998, cf. Box 7. The Executive Board is responsible for the day-to-day running of the ECB, including implementation of the monetary-policy decisions of the Governing Council. The Governing Council consists of the Executive Board and the central-bank governors of the 11 euro area member states, totalling 17 members. The ECB's third governing body is the General Council, which comprises the governors of all 15 EU countries' central banks and the President and Vice President of the Executive Board. The Governing Council meets around every two weeks and the General Council meets once a quarter. The ECB has furthermore established a number of committees to prepare for the meetings of the governing bodies.

Danmarks Nationalbank participates in meetings of the General Council. The Nationalbank also participates in ECB committees when issues pertaining to the General Council are on the agenda. The Nationalbank contributes a minor amount in the form of a small capital contribution to cover the costs associated with meetings in which Denmark participates. The yield on this small capital contribution covers the Nationalbank's estimated share of the costs. The amount disbursed to the Nationalbank on the liquidation of the EMI exceeded this deposit.

The ECB's monetary-policy strategy and instruments

The ECB's primary objective is to maintain price stability in the euro area. The strategy to achieve this objective is based on three elements: a quantitative definition of price stability, a reference value for growth in a broad monetary aggregate, and the development in a number of economic indicators. The Governing Council has defined price stability as

a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2 per cent.

The reference value for growth in the broad monetary aggregate must be consistent with the quantitative definition of price stability and the expected real GDP growth in the medium term, adjusted for expected changes in the velocity of circulation in the money supply. For 1999 the reference value is fixed at 4.5 per cent. A broad monetary aggregate, M3, comprising currency in circulation and various types of bank deposits, is used.

Finally, as the third element of its monetary-policy strategy the ECB intends to monitor a number of economic and financial indicators relevant to the expected development in prices, e.g. the development in long-term interest rates, confidence indicators, measures of output, wage development, raw material prices and the exchange rate of the euro.

The ECB's monetary-policy instruments correspond to the instruments used by the majority of the EU member states before the introduction of the euro. The most important instruments are a marginal lending and deposit facility for the banks at interest rates above and below the overnight market interest rate. The ECB will use refinancing operations to steer the short-term interest rates within this interest-rate corridor. The main refinancing operations are weekly tenders with a maturity of two weeks. The ECB also conducts regular long-term refinancing operations as monthly tenders with a maturity of three months. The ECB may conduct fine-tuning operations in order to cushion the effects of unexpected liquidity fluctuations. Furthermore, the ECB may conduct market operations to adjust the structural position of the Eurosystem vis-à-vis the financial sector.¹

The Governing Council has decided that the banks must deposit reserves with the Eurosystem corresponding to 2 per cent of selected liabilities. The ECB pays interest on these deposits at the rate of interest for the main refinancing operations. One of the objectives of the minimum reserve requirements is to contribute to stabilising the interbank interest rates.

The euro area member states have transferred a proportion of their foreign-exchange reserves to the ECB. The total transfer of gold, dollars and yen corresponds to around 40 billion euro. The administration of the foreign-exchange reserves thus transferred, i.e. their placement, etc. is undertaken on a decentralised basis by the national central banks, whereas the placement rules are laid down centrally.

¹ The monetary-policy strategy and instruments of the Eurosystem are explained in more detail in the ECB Monthly Bulletin, January 1999.

CONVERGENCE CRITERIA AND THE STABILITY AND GROWTH PACT

The euro area member states were selected in the spring of 1998. On 25 March 1998 the EMI and the European Commission each published a convergence report on the convergence position of the 15 EU member states. These convergence reports were the basis for the selection procedure as described in Article 109j¹ of the Maastricht Treaty. As a result of these assessments the European Commission recommended 11 member states (Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland) as participants in the third stage of EMU.

Against this background, on 1-3 May 1998 the EU heads of state or of government adopted the recommendation of the ECOFIN Council of the 11 member states to participate from the start on 1 January 1999. Box 8 presents an overview of other significant decisions made by the heads of state or of government and the ECOFIN Council during that weekend in May.

In order to ensure sustained budgetary discipline in the euro area after the introduction of the euro the EU member states have adopted the Stability and Growth Pact, which entered into force on 1 January 1999 simultaneously with the introduction of the euro. The Stability and Growth Pact imposes an obligation on all EU member states to aim for a medium-term budgetary position close to balance or in surplus. The euro area member states shall on an ongoing basis prepare and publish stability programmes specifying their medium-term budgetary objectives and how these objectives will be achieved. Sanctions may be imposed on the euro area member states. In the first instance a non-interest-bearing deposit will be required², should the member state fail to take effective measures to remedy a budget deficit exceeding 3 per cent of GDP. This deposit may be converted into a fine, should the excessive budget deficit persist for more than two years. However, in special cases the member state may avoid sanctions if a deficit exceeding 3 per cent of GDP is considered exceptional and

¹ The convergence criteria for the transition to the third stage according to the Maastricht Treaty: as a main rule the government deficit must not exceed 3 per cent of GDP and the government debt must not exceed 60 per cent of GDP. Average inflation, measured as the growth in consumer prices against the same month of the previous year, must not exceed by more than 1.5 percentage points the inflation rates of the – maximum three – best-performing member states with regard to price stability for a period of one year prior to the selection. For a period of one year prior to the selection the average long-term government bond yield or the average yield on equivalent securities must not exceed by more than 2 percentage points the yields in the – maximum three – best-performing member states with regard to price stability. Furthermore, the member states must have complied with the normal fluctuation margins in the ERM for at least two years without serious tensions. The legal convergence criteria are stated on p. 137.

² The deposit is between 0.2 and 0.5 per cent of the member state's GDP.

EMU DECISIONS 1-3 MAY 1998

Box 8

- Selection of the 11 participating countries.
- Adoption and pre-announcement of the bilateral conversion rates between the currencies of the participating member states as from 1 January 1999.
- Recommendation on appointment of the ECB's Executive Board and declaration concerning the rotation principle applying to appointments to the ECB's Executive Board.
- Adoption of the Council regulation concerning the introduction of the euro as the single currency of the participating member states.
- Adoption of the Council regulation on the technical specifications for the euro coins.
- Abrogation of the decision on the existence of excessive budget deficits in Belgium, Germany, Spain, France, Italy, Austria, Portugal, Sweden and the UK.

temporary. This is the case if the deficit is resulting from an unusual event outside the control of the relevant member state, or resulting from a severe economic downturn entailing an annual fall of real GDP of at least 2 per cent.

Non-euro area member states such as Denmark are subject to the objectives and requirements of the Stability and Growth Pact on equal terms with participating member states, although no sanctions may be imposed in the event of non-compliance.

In order to strengthen the coordination of economic policy in the euro area the Ministers of Economic Affairs of the euro area – the euro-11 group – hold informal meetings. The European Commission and, occasionally, the ECB, may participate in these meetings. The final decision-making body will still be the ECOFIN Council, in which all 15 EU member states are represented.

EURO BANKNOTES AND COINS

Euro banknotes and coins will be introduced in 2002. The banknotes will have a uniform design throughout the euro area, while the coins will have a common side and a national side, the design of which is up to the participating member states. The design of the euro banknotes and the common side of the euro coins were already decided in 1997. All member states participating in the single currency from the start, except Luxembourg, have published the design of their national euro coin sides. Several member states commenced production of euro coins in 1998, while the rest are expected to begin during 1999. Test production

of the euro banknotes has also begun in several euro area member states. The euro banknotes are the responsibility of the ECB, while the euro coins are subject to the authority of the ECOFIN Council, since in most countries the minting of coins is a government responsibility. The technical specifications of the new euro coins are expected to be finalised in the spring of 1999. The series of euro coins will comprise eight coins (1, 2, 5, 10, 20 and 50 cents and 1 and 2 euro) and the banknote series will comprise seven euro banknotes (5, 10, 20, 50, 100, 200 and 500 euro).

THE INTERNATIONAL MONETARY FUND

In 1998 the activities of the International Monetary Fund, IMF, were characterised by efforts to contain the effects of the crisis which started on the foreign-exchange and capital markets in Asia in 1997. The IMF concluded agreements for economic and political stabilisation programmes with Russia and Brazil. Very substantial loan commitments are associated with the agreements. The stabilisation programmes were to redress imbalances in these countries and ensure sustainable economic development. The ongoing programmes with the crisis-ridden Asian countries were monitored and agreements on new stabilisation programmes were concluded with e.g. Argentina and the Philippines. Furthermore, discussions on restructuring the architecture of the international financial system were initiated.

IMF programmes in 1998 to contain the financial crisis

For a long period *Russia* had suffered economic problems. In connection with the crisis in Asia the country was affected further by falling energy prices. In addition, a government crisis in Russia in the spring of 1998 resulted in the postponement of IMF disbursements to Russia. In July the IMF programme was renewed in an attempt to stabilise the Russian economy and support a continued economic reform process in Russia. It was agreed that Russia's government budget deficit would be reduced by half in 1999. Monetary and exchange-rate policies would remain unchanged.

On 17 August 1998 the Russian authorities abandoned their efforts to stabilise the currency. All payments to service Russia's debt were suspended, a mandatory restructuring of domestic government debt was introduced, and currency restrictions imposed. All these measures were in conflict with the IMF programme and in practice isolated Russia from the international capital markets and prevented further drawing on the IMF loan.

IMF LOANS TO RUSSIA AND BRAZIL

Box 9

On 20 July 1998 *Russia* was granted a loan extending the IMF's previous commitment to a total of USD 20.4 billion. In 1998 the World Bank and Japan granted further loan commitments totalling USD 2.7 billion. The IMF loan was raised by USD 11.2 billion, of which USD 8.3 billion was financed by activation of the IMF's GAB facility (General Arrangements to Borrow), a standing loan agreement with the G10 countries which in special cases finance the IMF's loans. The first tranche of the IMF loan, amounting to USD 4.8 billion, was disbursed immediately after the approval of the loan. No further disbursements were made under this loan commitment since Russia has failed to comply with the economic and political conditions of the IMF programme.

On 2 December 1998 *Brazil* was granted an IMF loan commitment of USD 18.1 billion as an element of a package totalling USD 41.6 billion. Other commitments were given by the Bank for International Settlements (BIS) (USD 14.5 billion), the World Bank and the Inter-American Development Bank (totalling USD 9 billion). The first tranche of the IMF loan totalled USD 5.3 billion, of which Brazil withdrew 90%, i.e. USD 4.8 billion, on 15 December. After approval of the loan the IMF also activated the NAB facility (New Arrangements to Borrow), a new credit agreement with a number of countries, including Denmark, which finance the IMF's loans in special circumstances, cf. Box 10. This was the first time that NAB was activated. 70 per cent of the IMF loan to Brazil is financed via the NAB facility. Under the agreement the IMF will repay the loans to the NAB creditors, including Denmark, once the IMF quota increase already decided is finalised.

The collapse in Russia led to renewed unrest on the international capital markets. The Brazilian currency came under pressure. In order to prevent the crisis from spreading further, in December 1998 Brazil was granted an international assistance package. The associated stabilisation programme focused especially on solving Brazil's fiscal-policy problems. The IMF loans to Russia and Brazil are described in Box 9.

Thailand, Indonesia and Korea all continued their IMF programmes in 1998. The recession in these countries proved to be stronger than expected and the IMF programmes were adjusted accordingly, by relaxing fiscal policy. A planned disbursement in March 1998 in Indonesia was postponed due to problems in complying with the programme. In July the IMF loan was extended and increased by USD 1.3 billion. The revised IMF programme has broadly been on track for the rest of the year.

Furthermore, the IMF has granted loans to and concluded agreements on economic and political programmes with e.g. *the Philippines* and *Argentina*. In February 1998 Argentina was granted a loan commitment

of USD 2.8 billion and in March 1998 the Philippines was granted a commitment of USD 1.4 billion. The loan commitments to Argentina and the Philippines respect the IMF's normal terms, in contrast to the loan commitments to Thailand, Indonesia, Korea, Russia and Brazil which were all extraordinarily large, as urgent crisis measures. Argentina has made no drawings on the commitment, which serves solely as a safety measure.

The restructuring of the architecture of the international financial system

The international financial crisis whereby the IMF granted very large loans has led to discussion of a restructuring of the architecture of the international financial system. The purpose is to create new instruments to prevent crises and to limit the adverse effects of any crises that do arise.

This will be achieved by such measures as improvement of data publication standards, requirements of the presentation of accounts of private and public business enterprises, prospectus standards, deposit-guarantee schemes and the structure of the supervision of financial enterprises. At the same time it is being discussed how to create a more transparent regulatory framework for the involvement of private business enterprises and bond holders in debt restructuring negotiations for countries which default on their payment commitments.

Financing of the IMF and Denmark's contribution

In 1998 the IMF granted loans totalling USD 44 billion, corresponding to kr. 284 billion, of which a good two thirds have been disbursed. The large loan commitments in recent years have reduced the IMF's liquidity, making it necessary to activate the IMF's two standing arrangements to borrow. The GAB facility was activated in connection with the loan commitment to Russia, and the NAB facility was activated in conjunction with the commitment to Brazil, cf. Box 10.

In connection with the disbursements, the IMF in 1998 drew an amount equivalent to kr. 2.9 billion on the Nationalbank from the ordinary quota funds. Denmark contributes to the loan to Brazil via its ordinary quota and in two further ways:

- The Nationalbank may contribute up to USD 150 million to the NAB loan. The IMF's first drawing on the Nationalbank was USD 48 million, corresponding to kr. 303 million.
- The Nationalbank made a government-guaranteed contribution to the loan extended by the Bank for International Settlements, BIS, with a

THE IMF'S CAPITAL BASE

Box 10

Quota contributions from the member countries constitute the capital base of the IMF. The quotas are fixed according to the size of the countries' economies and they determine the member countries' access to IMF loans and their votes on the IMF's Executive Board and Board of Governors. At the close of the IMF's financial year on 30 April 1998 the quotas totalled SDR 145.3 billion, corresponding to kr. 1,339.2 billion. Denmark's quota amounted to SDR 1,070 million or kr. 9,606 million, and its voting share was 0.73 per cent.

At the annual meeting of the IMF in 1997 approval in principle of a quota increase by 45 per cent was achieved. It entered into force on 22 January 1999. This brings the IMF's capital base up to SDR 212.0 billion and Denmark's quota contribution was raised to SDR 1,643 million.

A member country requiring international liquidity may draw on the IMF in proportion to the country's reserve position with the IMF. The reserve position, i.e. the difference between the country's IMF quota and the IMF's holding of that country's currency, is therefore included in the foreign-exchange reserve. Payment of a country's quota must be as $\frac{1}{4}$ foreign currency and $\frac{3}{4}$ national currency, and the reserve position is therefore initially $\frac{1}{4}$ of the quota. A country's reserve position is reduced if the country draws on the IMF, i.e. purchases foreign currency from the IMF against sale of its own currency to the IMF. A country's reserve position is increased if the IMF in connection with financing of its operations requests payments in foreign currency against the IMF's reduction of its holding of the country's national currency. At end-1998 Denmark's reserve position with the IMF was kr. 7.122 billion, or 74 per cent of Denmark's quota.

In addition to the IMF's quota capital the Fund may strengthen its liquidity by drawing on NAB (New Arrangements to Borrow). NAB is a standing loan agreement between the IMF and 25 member countries which gives the IMF credit for up to SDR 34 billion. The Nationalbank's loan commitment amounts to SDR 371 million. NAB was ratified by the participating countries on 17 November 1998 and was activated for the first time in connection with an IMF loan to Brazil in December 1998. The new arrangement to borrow will be used in conjunction with the existing GAB facility (General Arrangements to Borrow).

guarantee of USD 50 million. Furthermore, a proportional guarantee has been issued for any interest owed to BIS.

The introduction of the euro and SDR

As a consequence of the *introduction of the euro* as of 1 January 1999 the D-mark and the French franc were replaced by the euro in the IMF's special drawing rights, SDR, cf. Box 11.

SDR (Special Drawing Rights) are a special international drawing right issued by the IMF. SDR are used by the central banks of the member countries and the IMF. Their value as an international reserve asset derives from the member countries' commitment to hold and accept SDR as a means of payment between central banks. The central banks receive SDR and convert them to foreign currency. Each country's SDR holdings are part of the foreign-exchange reserve. A country accrues interest on its SDR holdings and the country pays interest on the SDR allocated by the IMF.

At the 1997 annual meeting of the IMF a special one-off allocation of SDR was adopted. All member countries are thus allocated SDR equivalent to 29 per cent of their quotas. This will double the existing amount of SDR to SDR 42.8 billion. The one-off allocation is subject to ratification by 3/5 of the member countries with at least 85 per cent of the voting rights. This ratification had not yet taken place by the end of 1998.

Before the one-off allocation the Nationalbank's SDR allocation was SDR 179 million. At end-1998 Denmark's SDR holdings were SDR 246 million. This includes the allocated SDR as well as SDR purchased by the Nationalbank for foreign currency from other countries in connection with such countries' purchase of other foreign currencies.

The value of SDR is calculated as a weighted basket of the currencies of the five member countries with the largest IMF quotas. On the introduction of the euro on 1 January 1999 the D-mark and the French franc were replaced by the euro in the SDR basket. The value of SDR is thereafter the sum of the value of the following currencies: EUR 0.3519, JPY 27.2000, GBP 0.1050 and USD 0.5821. The value of 1 SDR was kr. 8.98 on 31 December 1998.

Organisation

In 1998 work on a new electronic reporting system for payments between Denmark and abroad was concluded.

The establishment of the Nationalbank's Information Desk and Internet website have given easier access to statistics and information on the Nationalbank.

The Nationalbank's computer systems have been adjusted and tested as part of the Nationalbank's Year 2000 Project.

The number of employees fell by 13 to 566.

CHANGES IN TASKS

Collection and publication of statistics

Together with the Danish Bankers Association, the currency traders and their computer centres the Nationalbank in 1998 implemented a new electronic reporting system for payments to and from abroad.

For securities transactions the new system was introduced on 20 April 1998. For such transactions the system is based on automatic reporting via the currency traders' trading and settlement systems. All other payments from and to abroad which are settled via the currency traders became part of the electronic reporting system as from 5 October 1998.

For the currency traders and their customers the reporting system has eased the reporting burden. A balance of payment codification has been prepared for application to statistics for payments between Denmark and abroad. The system improves the basis for more detailed statistics.

As described in the 1997 Annual Report the Nationalbank has expanded and amended its publication of statistics. The first step was the issue of a new statistics publication series, *Nyt* (News), in January 1998. It comprises regular publication within eight topic groups: Interest and exchange rates, The banks' balance sheet, The mortgage-credit institutes' balance sheet, The Nationalbank's balance sheet, Securities, Central-government finance and debt, External payments and Direct investments. Moreover, the annual compilation of Denmark's external debt is published.

In addition to *Nyt* the Nationalbank as from June 1998 has published the *Monthly Financial Statistics*, which has been revised and significantly expanded in relation to the previous *Monthly Financial Statistics*. The

new *Monthly Financial Statistics* is a statistical reference which in contrast to the *Nyt* series does not include text commentaries. Instead, the emphasis is on providing an overview of the development in statistics for recent years as an extended time series. The *Monthly Financial Statistics* partly replace the Appendix of Tables in the Annual Report.

Cash supply

In 1998 changes were made in the handling of the cash-supply system, cf. p. 71ff.

New methods of providing information and communicating

On 1 January 1998 the Nationalbank established an *Information Desk* at the Secretariat. This unit will help provide a better service to people contacting the Nationalbank with enquiries. In 1998 the Information Desk received approximately 7,000 enquiries. In 1999 it was made possible to send questions in writing to: info@nationalbanken.dk; the Information Desk's e-mail address.

Since the *Nationalbank's website* opened on 25 May 1998 the number of visitors to www.nationalbanken.dk has been rising. From approximately 5,500 visitors in June 1998, at the beginning of 1999 the number had increased to 20,000 per month. Statistics for the most visited pages show that mainly professional enquirers use the Nationalbank's information pages and electronic publications. The most visited pages are:

- Official interest rates under *Markets*
- Money-market rates under *Markets*
- Exchange rates under *Markets*
- Press releases
- The new banknote series
- The "Nyt" (News) series under *Statistics*
- The tasks of the Nationalbank
- The Monetary Review
- Positions vacant at the Nationalbank

A *new design* has been created for the Nationalbank's publications. A graphic design standard has been chosen which ensures a uniform presentation of all publications. The new graphic design has two main colours, and a third colour signifying the publication category.

Information to the Faroe Islands on monetary and foreign-exchange issues

As an element of the agreement of 10 June 1998 between the government and the Faroese Home Rule the Nationalbank briefs the Faroese

Home Rule on current monetary and foreign-exchange conditions. At a meeting on 18 September 1998 with representatives from the Faroese Home Rule the guidelines for this provision of information were set out. It will take place at one or several annual meetings between the Nationalbank's Board of Governors and Home Rule representatives, as well as via the Nationalbank's publications, press releases and other information material.

Withdrawal from Finance for Danish Industry A/S (FIH)

The Nationalbank is in the process of divesting its shareholding in Finance for Danish Industry A/S (FIH). In 1958 the Nationalbank contributed to establishing FIH, the purpose of which was to promote industrialisation by extending medium-term loans for industry and small trades. This lending is now in competition with other financial institutions. The Nationalbank therefore no longer found it appropriate to be a joint owner. In connection with structural adjustments at FIH the Nationalbank has therefore decided to withdraw. One half of the share portfolio was sold in 1998.

YEAR 2000 PROJECT

Since 1997 the Nationalbank has worked to improve its systems in preparation for the millennium change. The Year 2000 Project is expected to be carried out as planned.

The project comprises review and testing of computer systems and computer hardware, as well as installations and infrastructure such as access control and surveillance.

The work of safeguarding the bank's computer systems takes place in close cooperation with Bankernes Edb Central (BEC), which is the Nationalbank's computer centre.

In 1998 all computer systems used by the Nationalbank at BEC were inspected to discover any year 2000 problems. The systems were analysed, adjusted and tested. After testing and approval by the Nationalbank the production of the adjusted programs was initiated. In the 4th quarter of 1998 BEC then performed integration testing, i.e. testing of whether the systems can operate together. Integration testing took place in a special year 2000 environment which simulates the millennium change as well as dates after 1 January 2000.

In the first half-year of 1999 the Nationalbank participates in a *sector test* together with the financial sector in order to ensure that the financial sector's settlement and clearing systems can communicate in the year 2000. The sector test is expected to be completed in mid-June

1999, although the ECB has planned the testing of the interface to the ECB's TARGET system to continue into September 1999.

During the same period a number of the Nationalbank's systems which are not affected by the sector testing will also be tested for year 2000 compatibility in the special year 2000 environment. Here, it is also possible to choose specific dates for test runs, as well as to test the effect of the millennium change on systems and data.

The Nationalbank has requested *supplier declarations* for all standard systems used on the bank's local network. The programs which have not been given a year 2000 declaration are mainly older programs which are being phased out. Testing of programs developed by the Nationalbank itself is planned to be concluded in mid-1999.

With regard to installations and infrastructure which may be affected by year 2000 problems the Nationalbank in 1998 initiated an extensive survey. It included telephone systems, alarm systems, access control and time registration systems, box systems, and various equipment related to production of banknotes and coins, etc. For systems for which this was possible testing of year 2000 functionality was carried out. In some cases supplier guarantees were obtained. Preparation of installations and infrastructure for the year 2000 is planned to be concluded in April/May 1999.

Before the end of the first half of 1999 plans will be drawn up for *emergency procedures* for critical operational systems in order to safeguard the ongoing operation of the Nationalbank in the event of year 2000 problems.

In order to meet any increasing demand for cash supplies up to the millennium change, like other central banks the Nationalbank has ceased destruction of old banknotes, so as to ensure an extra supply of cash.

THE NATIONALBANK'S MANAGEMENT

The Royal Bank Commissioner

The Minister of Economic Affairs and for Nordic Cooperation Ms. Marianne Jelved is the Royal Bank Commissioner.

Board of Directors

The Board of Directors re-elected Mr. Knud Koch Jensen, Mr. Erik B. Rasmussen and Mr. Helge Sørensen, who resigned by rotation, for a new five-year term from 1 April 1998. Mr. Erik B. Rasmussen takes his retirement on 31 March 1999.

After the parliamentary elections on 11 March 1998 the Folketing (Parliament) elected new members of the Board of Directors. Mr. Jacob

Buksti, MP and Ms. Gitte Seeberg, MP were elected as new members of the Board of Directors to replace former Minister Mr. Torben Lund, MP and Ms. Karen Højte Jensen, MP who both left Parliament after the election.

In February 1999 the Folketing (Parliament) elected Mr. Jan Petersen, MP as new member of the Board of Directors to replace Mr. Ove Fich, who left Parliament.

The Board of Directors re-elected Professor Hans E. Zeuthen as Chairman and Ms. Helle Bechgaard as Deputy Chairman for the period 1 April 1998 to 31 March 1999.

THE BOARD OF DIRECTORS OF DANMARKS NATIONALBANK, 1 MARCH 1999 Box 12

Chairman: *Hans E. Zeuthen*, Professor

Deputy Chairman: *Helle Bechgaard*, Senior Vice President, Ph.D. (Pharm.)

Elected by the Folketing for the period ending 31 March 2001:

Jacob Buksti, MP

Pia Christmas-Møller, MP

Uffe Ellemann-Jensen, MP

Jørgen Estrup, MP

Jes Lunde, MP

Jan Petersen, MP

Anders Fogh Rasmussen, MP

Gitte Seeberg, MP

Appointed by the Royal Bank Commissioner for the period ending 31 March 2001:

Michael Dithmer, Permanent Secretary, Ministry of Economic Affairs

Karsten Olsen, Former Deputy Permanent Secretary

Elected by the Board of Directors:

For periods ending 31 March

Bent le Fèvre, General Manager 1999

Jens Rostrup-Nielsen, Director, R&D Division, dr.techn. 1999

Hans E. Zeuthen, Professor 1999

Helle Bechgaard, Senior Vice President, Ph.D. (Pharm.) 2000

B. Frank Nielsen, General Manager 2000

Kirsten Stallknecht, Chairman of ICN 2000

Harry Nicolaisen, Farmer 2001

Finn Thorgrimson, Former President of the Trade Union Federation 2001

Margit Vognsen, Vice-President of the Danish Trade Union of Public Employees 2001

Jette W. Knudsen, Managing Director 2002

Kjeld Larsen, Farmer 2002

Kirsten Nielsen, President of the Consumer Council 2002

Knud Koch Jensen, Engineer 2003

Erik B. Rasmussen, General Manager, Civil Engineer 2003

Helge Sørensen, Civil Engineer 2003

The Board of Directors of the Nationalbank on 1 March 1999 is shown in Box 12.

Committee of Directors

For the period 1 April 1998 to 31 March 1999 the Board of Directors re-elected Mr. Uffe Ellemann-Jensen, Mr. Erik B. Rasmussen, Ms. Margit Vognsen and Professor Hans E. Zeuthen. Mr. Torben Lund was likewise re-elected to the Committee of Directors even though he left the Folketing after the election on 11 March 1998 and therefore was also to resign from the Nationalbank's Board of Directors and Committee of Directors. Shortly thereafter the Folketing elected new members of the Board of Directors, and the Board of Directors elected Mr. Jacob Buksti as member of the Committee of Directors to succeed Mr. Torben Lund.

Two members of the Committee of Directors, Mr. Michael Dithmer and Mr. Karsten Olsen, are appointed by the Royal Bank Commissioner until 31 March 2001.

The Committee of Directors re-elected Professor Hans E. Zeuthen as Chairman and Mr. Michael Dithmer as Deputy Chairman for the period 1 April 1998 to 31 March 1999.

The Nationalbank's Committee of Directors on 1 March 1999 is presented in Box 13.

Board of Governors

As Governor by Royal Appointment Ms. Bodil Nyboe Andersen is Chairman of the Board of Governors. The two other members are Mr. Torben Nielsen and Mr. Jens Thomsen.

THE COMMITTEE OF DIRECTORS OF DANMARKS NATIONALBANK,
1 MARCH 1999

Box 13

Chairman: *Hans E. Zeuthen*, Professor

Deputy Chairman: *Michael Dithmer*, Permanent Secretary, Ministry of Economic Affairs

Elected by the Board of Directors for the period ending 31 March 1999:

Jacob Buksti, MP

Uffe Ellemann-Jensen, MP

Erik B. Rasmussen, General Manager, Civil Engineer

Margit Vognsen, Vice-President of the Danish Trade Union of Public Employees

Hans E. Zeuthen, Professor

Appointed by the Royal Bank Commissioner for the period ending 31 March 2001:

Michael Dithmer, Permanent Secretary, Ministry of Economic Affairs

Karsten Olsen, Former Deputy Permanent Secretary

Auditors

The Royal Bank Commissioner re-appointed State-Authorised Public Accountant Mr. John Gath and State-Authorised Public Accountant Mr. Svend Ørjan Jensen to be the Nationalbank's external auditors for the year ending 31 March 1999.

ADMINISTRATION

The Nationalbank has 15 departments, including the Note Printing Works and the Royal Mint. No changes have been made to the organisation chart in 1998, cf. p. 102. The chart includes the managers of each department.

Staff

During 1998 the Nationalbank's staff decreased by 13 to 566.

The number of employees has decreased at the Note Printing Works, the Royal Mint and in the "Other" group which includes cleaning and canteen personnel, service assistants, craftsmen, etc. The decrease in the number of employees at the Royal Mint is mainly due to changes in the handling of coins, cf. the 1997 Annual Report, p. 66. The number of bank and clerical staff has increased by eight.

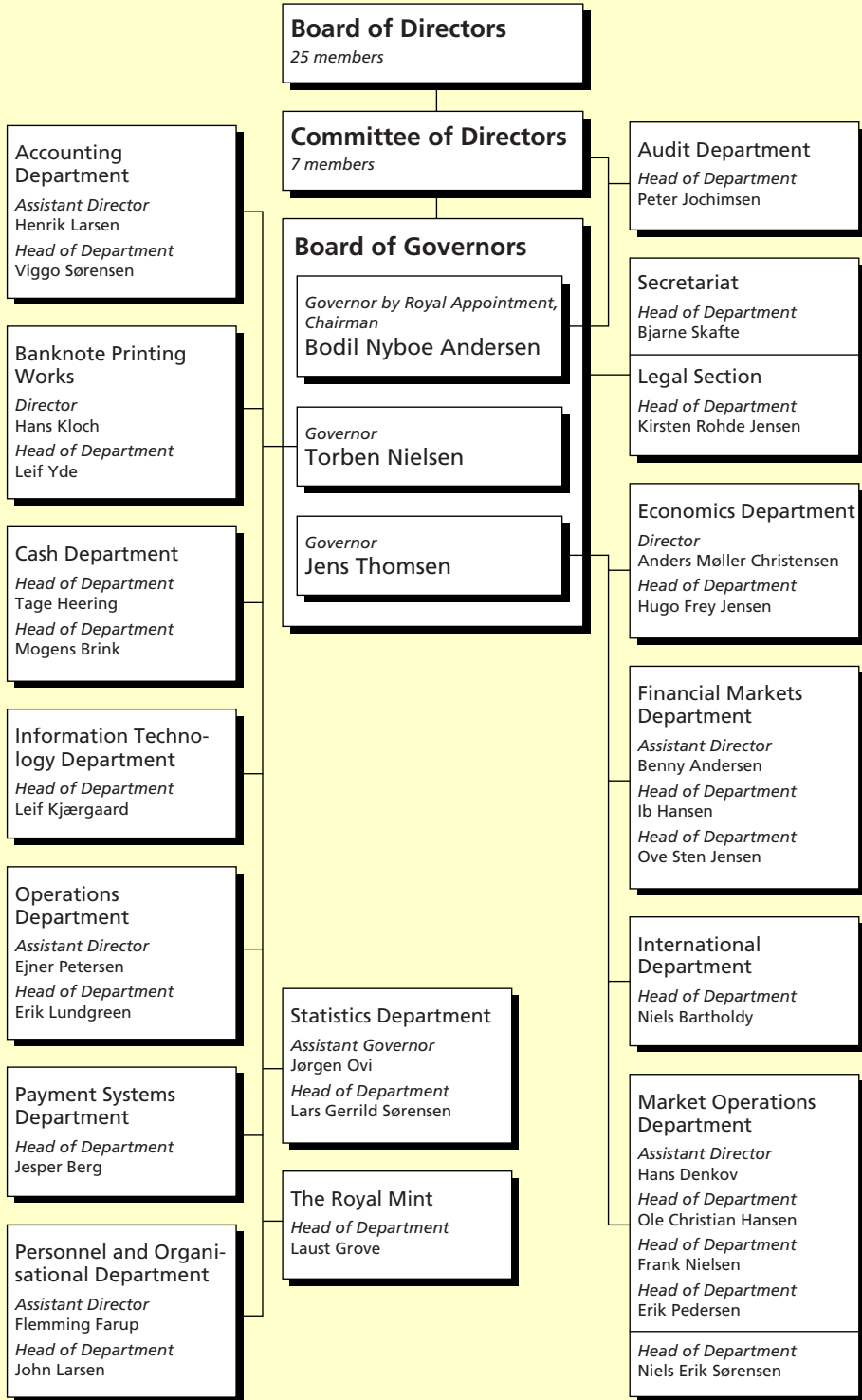
In 1998 14 employees left the bank under severance agreements.

At the close of 1998 24 employees were on leave, primarily working for international organisations, of whom nine at the ECB.

Four employees were on leave under statutory leave schemes.

NUMBER OF STAFF, CONVERTED INTO FULL-TIME POSITIONS					Table 9
Year-end	1994	1995	1996	1997	1998
Bank and clerical staff	302	311	320	318	326
Note Printing Works staff	81	83	82	82	77
The Royal Mint	45	40	29	26	16
Other	161	158	155	153	147
Total	589	592	586	579	566

ORGANISATION CHART 1 MARCH 1999



REPRESENTATION IN INTERNATIONAL ORGANISATIONS

As an element of the international foreign-exchange and monetary-policy cooperation Danmarks Nationalbank participates in a number of committees, sub-committees and working groups, of which the most significant are:

The European Union, EU

The Economic and Financial Committee:

Governor *Jens Thomsen* (with *Michael Dithmer*, Permanent Secretary, Ministry of Economic Affairs).

Niels Bartholdy, Head of Department, is an alternate member of the Committee (with *Henrik Fugmann*, Deputy Secretary, Ministry of Economic Affairs).

The Economic Policy Committee:

Hugo Frey Jensen, Head of Department (with *Per Bremer Rasmussen*, Deputy Secretary, and *Lise-Lotte Teilmand*, Special Adviser, Ministry of Economic Affairs, and *Per Callesen*, Deputy Secretary, Ministry of Finance).

The Banking Advisory Committee:

Benny Andersen, Assistant Director (with *Torben Garne*, Director, Ministry of Economic Affairs, and *Henrik Bjerre-Nielsen*, Director General, the Financial Supervisory Authority).

The Working Group of Mint Directors:

Laust Grove, Director, the Royal Mint, and *Ulrikke Ekelund*, Head of Section.

The European Central Bank, ECB

The General Council:

Governor *Bodil Nyboe Andersen*.

The Nationalbank participates partly in the following ECB committees:

International Relations Committee:

Governor *Jens Thomsen* and *Niels Bartholdy*, Head of Department.

Payment and Settlement Systems Committee:

Governor *Torben Nielsen* and *Tobias Thygesen*, Head of Section.

Banking Supervision Committee:

Benny Andersen, Assistant Director, (with *Henrik Bjerre-Nielsen*, Director General, the Financial Supervisory Authority).

Monetary Policy Committee:

Hugo Frey Jensen, Head of Department, and *Hanne Lyngesen*, Head of Section.

Market Operations Committee:

Frank Nielsen, Head of Department.

Information Technology Committee:

Leif Kjærgaard, Head of IT, and *Jørgen Petersen*, Assistant Head of Department.

Legal Committee:

Kirsten Rohde Jensen, Head of Department and *Louise Mogensen*, Head of Section.

Accounting and Monetary Income Committee:

Henrik Larsen, Assistant Director, and *Allan Damm Christensen*, Head of Section.

Banknote Committee:

Hans Kloch, Director, and *Tage Heering*, Head of Department.

Statistics Committee:

Jørgen Ovi, Assistant Governor.

Internal Auditors Committee:

Peter Jochimsen, Chief Auditor, and *Stephan Green Löwe*, Head of Section.

External Communications Committee:

Bjarne Skafte, Head of Department

The International Monetary Fund, IMF

Governor *Bodil Nyboe Andersen* is the Danish member of the IMF's Board of Governors. (*Michael Dithmer*, Permanent Secretary, Ministry of Economic Affairs, is an alternate member of the Board).

Kai Aaen Hansen, Director, is Executive Director for the Nordic/Baltic countries at the IMF until 31 December 1999.

Organisation for Economic Cooperation and Development, OECD

The Economic Policy Committee:

Governor *Jens Thomsen* (with *Michael Dithmer*, Permanent Secretary, Ministry of Economic Affairs, and *Anders Eldrup*, Permanent Secretary, Ministry of Finance).

Nordic Council of Ministers

Nordic Financial Committee:

Governor *Jens Thomsen* and *Niels Bartholdy*, Head of Department (with *Henrik Fugmann*, Deputy Secretary, Ministry of Economic Affairs).

DANMARKS NATIONALBANK'S ANNIVERSARY FOUNDATION OF 1968

In 1998 the Foundation's honorary grant was awarded to Mr. Hans Jørgen Brøndum, Publisher, Brøndums Forlag og Grafiske Værksted, and to Mr. Ejnar Pedersen, Master Carpenter, PP Møbler ApS, who each received kr. 100,000 kr.

The purpose of the Foundation is to extend financial support for the promotion and development of the artistic design and presentation of Danish products and to support other artistic areas, mainly decorative art, architecture and design, but also music and dance. In 1998 total grants amounted to kr. 5.6 million. Of 1,349 applications, 159 were granted. In addition, seven grants without prior application were made.

On 1 March 1999 the Board of the Foundation comprised Governor Bodil Nyboe Andersen (Chairman), Professor Hans E. Zeuthen (Deputy Chairman), Ms. Bodil Busk Laursen, Ms. Bente Scavenius, Mr. Teit Weylandt and Mr. Mads Øvlisen.

THE NATIONALBANK'S GUEST APARTMENTS AT NYHAVN 18

The Nationalbank has seven guest apartments at Nyhavn 18 which are made available to foreign scientists and artists. Residence in the guest apartments is free and granted from three months up to one year. In 1998 the guest apartments at Nyhavn 18 were allocated to 11 visitors.

The Committee formed to advise on the allocation of the apartments consists of Professor Ole Feldbæk (Chairman), Dr. Else Marie Bukdahl and Professor Niels I. Meyer.

THE ERIK HOFFMEYER TRAVEL GRANT FOUNDATION

The establishment and objective of the Foundation are described in the 1995 Annual Report.

In 1998 the Erik Hoffmeyer Travel Grant Foundation awarded grants for the third time. Two grants of kr. 45,000 each were made to the poet, writer and dramatist Naja Marie Aidt and to the architect, sculptor and artist Khaled D. Ramadan. Both received the grant for further studies abroad.

On 1 March 1999 the Board of the Travel Grant Foundation comprised Professor Hans E. Zeuthen (Chairman), former Governor Erik Hoffmeyer and former Chief Rabbi Bent Melchior.

Presentation of the Nationalbank's Accounts

The Nationalbank's accounts for 1998 show a profit of kr. 5,428 million. The profit from financial items was kr. 5,843 million, of which positive value adjustments, etc. were kr. 995 million. After allocations to the Value Adjustment Reserve and to the General Reserves the remainder of kr. 3,104 million is payable to the central government.

THE NATIONALBANK'S MANAGEMENT OF FINANCIAL RISKS

The Nationalbank holds considerable financial assets and liabilities. The principal assets are foreign deposits and securities, domestic debt securities and loans to Danish banks. The principal liabilities are banknotes and coins in circulation, certificates of deposit and the deposits of the central government.

The financial assets and liabilities expose the Nationalbank to various financial risks which can affect its financial results. These are primarily the credit risk, the interest-rate risk and the exchange-rate risk.

Credit risk

The credit risk is the risk of loss due to default on commitments by counterparty.

To reduce the credit risk the Nationalbank seeks to hold assets only with counterparties with a high credit standing. Moreover, to a large extent collateral is required. The Nationalbank's credit risk is therefore very small.

The credit risk on the *foreign assets*, i.e. accounts with foreign banks, governments, etc. is managed on the basis of the ratings given by international rating agencies. It is important that the counterparty has a high rating. Moreover, most outstandings are subject to maximum limits.

Furthermore, for deposits with foreign banks repo agreements are used to a great extent. In repo agreements, the Nationalbank receives government securities as collateral. Should the foreign bank be subject to compulsory liquidation, the Nationalbank's deposit is covered by the collateral provided.

The Nationalbank's foreign bonds are almost exclusively issued by OECD states with a high rating, or are guaranteed by such states. The

Nationalbank thus does not hold corporate bonds or bonds issued by governments with a low credit rating.

The credit risk on the *domestic assets* is limited by the collateral requirement, as well as a prudent investment policy. When Danish banks borrow from the Nationalbank they provide bonds as collateral. This applies to lending in conjunction with the Nationalbank's monetary-policy operations, the bank's intraday credits and the cash depots.

On placement of the domestic securities portfolio great weight is attached to the high credit standing of the issuers. The securities portfolio predominantly comprises government bonds, mortgage-credit bonds and Ship Credit Fund bonds, i.e. "gilt-edged" securities.

Interest-rate risk

The interest-rate risk is the risk of capital losses as a consequence of a change in interest rates. Since the Nationalbank holds significantly more fixed-rate assets than liabilities an increase in interest rates will impose a loss. The Nationalbank could avoid this loss by exclusively holding outstandings at floating rates. However, experience shows that the returns on fixed-rate debt securities are higher than on placements at floating rates. Over an extended period the Nationalbank will therefore obtain a higher return for assuming an interest-rate risk. Placement in bonds with a high credit rating also ensures the Nationalbank a lower, more widely spread credit risk than on placement with banks alone.

In 1998 the sensitivity to changes in interest rates of the Nationalbank's portfolio of domestic and foreign bonds was increased by kr. 1.0 billion to kr. 3.4 billion, cf. Table 10. At the close of 1998 the holdings of foreign bonds comprised five currencies (D-mark, French franc, pound sterling, dollar and yen) and the sensitivity to changes in

SENSITIVITY OF THE NATIONALBANK TO CHANGES IN INTEREST RATES		Table 10
Capital loss in kr. billion on a general 1 per cent increase in interest rates	End-1997	End-1998
D-mark.....	0.6	1.0
French franc	0.1	0.2
ECU	0.0	0.0
Pound sterling	0.1	0.2
Swiss franc	0.0	0.0
Dollar	0.4	0.6
Yen	0.1	0.2
Other currencies	0.0	0.0
Foreign bonds, total	1.4	2.3
Domestic bonds	0.9	1.1
Total	2.4	3.4

interest rates of these bonds constituted approximately 2/3 of the overall interest-rate sensitivity.

After the increase in the sensitivity to changes in interest rates a general increase by 1 per cent in the domestic and international interest rates will entail a capital loss of kr. 3.4 billion on the Nationalbank's bond portfolio, equivalent to 8 per cent of the total net capital.

The Nationalbank increased its interest-rate risk in expectation of higher earnings in the long term. Placements in fixed-yield bonds were hereby increased, while deposits with banks were reduced.

Exchange-rate risk

The exchange-rate risk is the risk of exchange-rate losses due to fluctuations in exchange rates. The Nationalbank holds considerable foreign-exchange assets, first and foremost the foreign-exchange reserve. Like other central banks, the Nationalbank therefore cannot avoid an exchange-rate risk.

The Nationalbank's exchange-rate risk is subject to coordinated management with the exchange-rate risk on the central government's foreign-exchange denominated debt. This coordinated management entails that in principle the central-government debt denominated in dollars, yen, pounds sterling and Swiss francs is set off by an equivalent asset held by the Nationalbank. The net position, i.e. the difference between the Nationalbank's foreign-exchange assets and the central government's foreign-exchange liabilities, has in recent years been primarily in the core EMS currencies, mainly D-mark. In view of Denmark's fixed-exchange-rate policy these currencies were found to entail the lowest risk.

CURRENCY DISTRIBUTION OF THE NATIONALBANK'S
FOREIGN-EXCHANGE POSITIONS

Table 11

Market value, kr. billion	End-1997	End-1998
D-mark	116	89
French franc	7	7
ECU	2	10
Pound sterling	5	0
Swiss franc	2	- 1
Dollar	5	2
Yen	- 2	- 1
Other currencies	1	3
Total	137	108

Note: Besides the foreign-exchange reserve foreign-exchange positions comprise unsettled forward contracts and domestic foreign-exchange positions. Negative amounts indicate a liability for the Nationalbank.

In addition, the objective is to ensure a moderate exchange-rate risk on both the central government's foreign-exchange denominated debt and the Nationalbank's foreign-exchange denominated assets. In recent years a large proportion of both the central government's debt and the Nationalbank's assets have been converted to D-mark. The Nationalbank's financial result is thus only influenced to a moderate extent by fluctuations in the krone against the dollar, yen, pound sterling and Swiss franc, cf. Table 11. At the close of 1998 depreciation of the dollar by e.g. 10 per cent would entail a loss of approximately kr. 200 million, or 0.5 per cent of the total net capital.

The individual foreign-exchange positions in Table 11 do not typically reflect the size of the Nationalbank's placements in debt securities and with banks, etc. in the relevant currency. The Nationalbank holds considerable portfolios in dollars, yen and pounds sterling. In order to limit the exchange-rate risk on those currencies, however, the Nationalbank on an ongoing basis sells dollars, yen and pounds sterling forward against euro (up to the 1998/99 turn of the year mainly sales against D-mark). For example, at the close of 1998 the Nationalbank held dollar-denominated assets for kr. 31 billion, but had sold dollars forward for kr. 29 billion. The total net dollar position was therefore only kr. 2 billion.

PRESENTATION OF THE NATIONALBANK'S ACCOUNTS

The Nationalbank's accounts with notes are shown on p. 116ff. The accounts for 1998 have been prepared in accordance with the same accounting policies as in the previous year, with the exception of reclassification of individual items of the profit and loss account and the balance sheet, and the inclusion of value adjustments in the profit from financial items. The reclassification does not affect the profit for the year or the value of assets and liabilities.

The accounts reflect that the Nationalbank issues banknotes and coins, administers the foreign-exchange reserve and functions as banker to the banks and the central government. The Nationalbank's profit not allocated to the reserves shall be paid to the central government.

In 1998 the profit from financial items was kr 5,843 million and thereby kr. 395 million lower than in 1997. Of this profit positive value adjustments, etc. were kr. 995 million. After other income of kr. 68 million and expenses of kr. 482 million the profit for the year was kr. 5,428 million, or kr. 196 million less than in 1997.

Net income from interest

Net income from interest totalled kr. 4,848 million, which is kr. 376 million less than in 1997.

Income from interest on foreign assets rose by kr. 213 million to kr. 5,102 million, due to a larger average foreign-exchange reserve in 1998 than in 1997.

Interest on lending to and deposits from the banks gave net interest expenditure of kr. 721 million in 1998, against net interest expenditure of kr. 1,195 million in 1997. The rates of interest for deposits and lending, i.e. the rates of interest for certificates of deposit and repurchase agreements respectively, are identical. However, current-account deposits, accounting for only a small proportion of deposits, accrue interest at the discount rate, which is below the rate of interest for certificates of deposit. As an annual average the rate of interest on certificates of deposit was higher in 1998 than in 1997, but the banks' net position with the Nationalbank was smaller, cf. p. 46.

The Nationalbank's interest expenditure on the central government's deposit rose by kr. 775 million to kr. 2,045 million. Both the central government's deposit and the discount rate, which is the rate of interest on the central government's deposit, were on average higher than in 1997.

Interest on loans to other borrowers fell by kr. 77 million, mainly due to the Danish Export Finance Corporation's ongoing reduction of its borrowing.

Interest to other depositors, etc. rose by kr. 73 million to kr. 138 million, primarily as a consequence of higher interest expenditure on the Nationalbank's commitments to the Ship Credit Fund, cf. the 1997 Annual Report, p. 96. In 1998 index-linked bonds for kr. 623 million were redeemed prematurely.

Interest and dividend on bonds and shares, etc. fell by kr. 108 million to kr. 2,520 million.

Value adjustments, etc.

Value adjustments, etc. resulted in a gain of kr. 995 million.

Value adjustment of the Nationalbank's gold stock gave a loss of kr. 296 million, since both the gold price, which is fixed in dollars, and the dollar's exchange rate fell.

Value adjustment of foreign-exchange positions, which in addition to the foreign-exchange reserve comprise forward contracts and domestic foreign-exchange balances, provided a gain of kr. 844 million, derived from an exchange-rate loss of kr. 389 million and a market-value gain of kr. 1,233 million. The exchange-rate loss is related to the lower exchange

rates for the dollar, D-mark and yen, while the market-value gain is attributable mainly to falling interest rates in Germany and the USA.

The value adjustment of bonds and shares, etc. gave a total gain of kr. 447 million. The gain on Danish bonds was kr. 149 million.

The Nationalbank's sale of shares in Finance for Danish Industry (FIH), cf. p. 97, realised a capital gain of kr. 252 million since in general the shares are booked at kr. 1 per shareholding in the Nationalbank's accounts.

The net proceeds to the Nationalbank from the reimbursement of capital contributions to the EMI/ECB were kr. 46 million.

The drop in yields on domestic and foreign bonds entails an increase in market values. However, part of the bond portfolio comprises securities at high nominal interest rates, for which market prices have fallen as a consequence of the reduction of remaining maturity. Capital losses as a consequence of a reduction of remaining maturity on domestic and foreign bonds are estimated at almost kr. 1.5 billion. These capital losses are set off by higher net income from interest. The distribution of earnings between net income from interest and value adjustments is thus affected by the high nominal interest rates of the bonds.

Other income from ordinary operations

Other income in 1998 amounted to kr. 68 million, of which the greatest part concerns the liquidation of the War Risk Cargo Insurance for Danish Ships. In connection with the liquidation the original guarantee capital and the total net capital were distributed among the guarantors. Kr. 55 million was disbursed to the Nationalbank.

The Nationalbank has furthermore received VAT reimbursements on IT services.

Expenses

Total expenses increased by kr. 56 million to kr. 482 million.

Administrative expenses amounted to kr. 376 million. Direct and indirect staff expenses rose by 5.1 per cent. Expenditure on purchases of machinery and equipment and on data processing increased, while expenditure on operation of properties remained almost unchanged. The expenditure on the presentation of the new 1,000-krone banknote was kr. 5 million.

Result for the year

The result for the year is a profit of kr. 5,428 million, against a profit of kr. 5,624 million in 1997. In accordance with the practice for allocation

of profits the gain on value adjustments for the year of kr. 995 million is allocated to the Value Adjustment Fund, and kr. 1,330 million, equivalent to 30 per cent of the profit excluding value adjustments, is allocated to the General Reserves. The remainder of kr. 3,104 million is payable to the central government.

Copenhagen, end-February 1999.

Bodil Nyboe Andersen

Torben Nielsen

Jens Thomsen

At the meeting of the Board of Directors held on 18 March 1999 the Board of Governors reported on the activities of the Nationalbank in 1998. The report was noted.

The Nationalbank's Accounts for 1998 were submitted by the Board of Governors for adoption on the recommendation of the Committee of Directors. The Board of Directors and the Royal Bank Commissioner accepted the recommendation. Of the profit for the year of kr. 5,428 million an amount of kr. 3,104 million is thus payable to the central government.

Accounts

for the Year 1998

PROFIT AND LOSS ACCOUNT FOR THE YEAR 1998

Note	1998 kr. '000	1997 kr. '000
Income from interest, etc.:		
Interest on foreign assets	5,101,568	4,888,487
1 Interest on loans etc.	1,678,387	1,351,587
Interest and dividend on bonds and shares, etc. ...	2,520,201	2,628,426
Commission and other income	3,911	6,226
	<u>9,304,067</u>	<u>8,874,726</u>
Expenditure on interest, etc.:		
Interest on foreign liabilities	96,656	69,887
2 Interest on deposits, etc. and certificates of deposit	4,359,206	3,580,900
	<u>4,455,862</u>	<u>3,650,787</u>
Net income from interest	4,848,205	5,223,939
Value adjustments, etc.:		
Value adjustment of gold	- 296,006	- 468,869
Value adjustment of foreign assets	844,062	1,617,092
3 Value adjustment of bonds and shares etc.	446,539	- 134,289
	<u>994,595</u>	<u>1,013,934</u>
Profit from financial items	5,842,800	6,237,873

PROFIT AND LOSS ACCOUNT FOR THE YEAR 1998

Note	1998 kr. '000	1997 kr. '000
Profit from financial items	5,842,800	6,237,873
4 Other income from ordinary operations	67,671	–
Expenses:		
5 Administrative expenses	376,244	327,821
6 Expenses incidental to the note production	81,803	78,122
7 Expenses incidental to The Royal Mint	24,147	20,719
	482,194	426,662
Other expenditure on ordinary operations	–	187,235
Profit for the year	5,428,277	5,623,976
Which is allocated as follows:		
Allocation to Value Adjustment Reserve	994,595	1,013,934
Allocation to General Reserves.....	1,330,105	1,383,013
Payable to the central government	3,103,577	3,227,029

Pursuant to the Danmarks Nationalbank Act the profit for the year after allocations is payable to the central government.

BALANCE SHEET AT DECEMBER 31, 1998

Note	1998 kr. '000	1997 kr. '000
Assets		
Stock of gold	3,933,559	<i>3,330,909</i>
Foreign assets	89,416,246	<i>115,843,756</i>
Claims on the European Monetary Institute	–	<i>4,790,341</i>
8 Claims on the IMF, including SDR holdings	9,329,804	<i>6,602,050</i>
9 Loans etc.	40,225,314	<i>37,115,599</i>
Bonds and shares, etc.	37,486,642	<i>33,766,468</i>
10 Other assets	2,383,086	<i>2,802,460</i>
Accruals	19,247	<i>19,563</i>
Total assets	<u>182,793,898</u>	<i><u>204,271,146</u></i>

BALANCE SHEET AT DECEMBER 31, 1998

Note	1998 kr. '000	1997 kr. '000
Liabilities		
Banknotes	37,198,773	35,078,755
Coins	3,815,871	3,630,988
Foreign liabilities	1,252,999	876,282
Allocations of Special Drawing Rights in the International Monetary Fund (SDRs)	1,605,805	1,647,767
11 Deposits etc.	21,230,616	33,862,778
Certificates of deposit	34,752,000	52,738,000
Central government	37,130,934	33,953,919
Other liabilities	2,333,031	1,333,488
Total creditors	139,320,029	163,121,977
General Capital Fund	50,000	50,000
Statutory Reserve	250,000	250,000
Value Adjustment Reserve	3,101,450	2,106,855
General Reserves	40,072,419	38,742,314
Total net capital	43,473,869	41,149,169
Total liabilities	182,793,898	204,271,146
12 Off-balance-sheet items:		
Guarantees	688,508	419,925
Other liabilities	74,533,935	57,537,178
	75,222,443	57,957,103

NOTES ON THE ACCOUNTS FOR 1998

	1998 kr. '000	1997 kr. '000
Accounting policies		
<p>The accounts for 1998 have been prepared in accordance with the same accounting policies as in the previous year, with the exception of the reclassification of individual items of the profit and loss account and the balance sheet, and the inclusion of value adjustments in the profit from financial items. The comparative figures have been adjusted. The reclassification does not affect the profit for the year or the value of assets and liabilities.</p>		
<p>Gold is entered at the price quoted at the year's last gold fixing in London.</p>		
<p>Assets and liabilities in foreign exchange are entered at the official exchange rates and the market prices prevailing at year-end.</p>		
<p>Bonds and shares. The bond portfolio is entered at the official market prices quoted at year-end. Shares are entered at kr. 1 per shareholding. The estimated value at year-end of the share portfolio is kr. 0.9 billion.</p>		
<p>Properties, machinery and equipment are entered as expenditure in the year of acquisition. At the most recent official public assessment the banks' properties were valued at kr. 652 million.</p>		
Note		
1 Interest on loans etc.		
Interest on loans to domestic banks	1,454,884	1,051,484
Interest on loans to other borrowers	223,503	300,103
	1,678,387	1,351,587
2 Interest on deposits, etc. and certificates of deposit		
Interest on deposits from domestic banks	211,511	137,034
Interest on the central government's deposits	2,045,415	1,270,655
Interest to other depositors, etc.	137,609	64,217
Interest on certificates of deposit	1,964,671	2,108,994
	4,359,206	3,580,900
3 Value adjustment of bonds and shares, etc.		
<p>This includes sales proceeds of kr. 251.6 million on the sale of one half of the bank's shareholding in Finance for Danish Industry.</p>		

NOTES ON THE ACCOUNTS FOR 1998

Note	1998 kr. '000	1997 kr. '000
4 Other income from ordinary operations		
The amount concerns kr. 55.3 million received on the dissolution of the War Risk Cargo Insurance for Danish Ships and reimbursement of VAT for previous years of kr. 12.4 million.		
5 Administrative expenses		
Fees and salaries	170,930	166,724
Indirect staff expenses, including contributions to staff pension schemes	43,894	37,659
Purchases of machinery and equipment	28,298	14,998
Real property, current expenses	31,194	30,630
Data processing and expenses incidental to the Securities Centre	59,341	31,022
Other expenses	42,587	46,788
	<u>376,244</u>	<u>327,821</u>
6 Expenses incidental to the note production		
Fees and salaries	36,206	37,982
Indirect staff expenses, including contributions to staff pension schemes	8,331	7,524
Purchases of paper and materials	17,338	7,529
Purchases of machinery and equipment	3,346	7,975
Real property, current expenses	9,330	9,105
Other expenses	7,252	8,007
	<u>81,803</u>	<u>78,122</u>
7 Expenses incidental to The Royal Mint		
Expenses		
Fees and salaries	5,907	7,874
Indirect staff expenses	1,312	1,771
Purchases of metal, blanks and materials	17,053	10,269
Purchases of machinery and equipment	1,188	319
Real property, current expenses	1,463	2,892
Other expenses	860	1,537
	<u>27,783</u>	<u>24,662</u>
Receipts		
Sales of metal	917	2,310
Sales of coin sets and medals	2,166	1,474
Other receipts	553	159
	<u>3,636</u>	<u>3,943</u>
Net expenses	<u>24,147</u>	<u>20,719</u>

NOTES ON THE ACCOUNT FOR 1998

Note	1998 kr. '000	1997 kr. '000
8 Claims on the IMF including SDR holdings		
Denmark's IMF quota	9,605,348	<i>9,856,347</i>
The IMF's holdings of Danish kroner.....	2,483,765	<i>5,545,608</i>
Reserve position with the IMF	7,121,583	<i>4,310,739</i>
Holdings of previous SDR allocations in the IMF	2,208,221	<i>2,291,311</i>
	9,329,804	<i>6,602,050</i>
9 Loans, etc.		
Banks	37,151,167	<i>31,650,599</i>
Other borrowers	3,074,147	<i>5,465,000</i>
	40,225,314	<i>37,115,599</i>
10 Other assets		
This amount includes outstanding interest of kr. 2,372 million (1997: kr. 2,491 million).		
11 Deposits, etc.		
Banks	17,076,412	<i>28,551,107</i>
Other depositors	4,154,204	<i>5,311,671</i>
	21,230,616	<i>33,862,778</i>
12 Off-balance-sheet items		
Other liabilities include unsettled purchases on forward terms of kr. 74,534 million (1997: kr. 57,537 million).		

AUDIT REPORTS AND ADOPTION BY THE BOARD OF DIRECTORS

Danmarks Nationalbank

Copenhagen, February 15, 1999

Bodil Nyboe Andersen

Torben Nielsen

Jens Thomsen

/Henrik Larsen, Chief Accountant

Report of the internal audit

We have audited the annual accounts of Danmarks Nationalbank for the year 1998 presented by the Management.

Basis of opinion

We have conducted the audit on the basis of the Danmarks Nationalbank Act and Danmarks Nationalbank's By-Laws and in accordance with the auditing standards generally accepted in Denmark.

Based on an evaluation of materiality and risk we have assessed whether the Bank's procedures and internal control systems provide adequate security, just as we have tested the basis and documentation for the amounts and other information presented in the annual accounts. This included an assessment of the applied accounting policies and the accounting estimates made, as well as an assessment of the adequacy of the information presented in the annual accounts.

The audit has not resulted in any qualifications.

Opinion

In our opinion the annual accounts have been prepared in accordance with the Danmarks Nationalbank Act and Danmarks Nationalbank's By-Laws and reflect the income and expenses for the year and the assets and liabilities as at December 31, 1998.

Copenhagen, February 15, 1999

Geert E. Petersen, Acting Chief Auditor

Report of the external auditors

As auditors appointed by the Royal Bank Commissioner we have audited the annual accounts for the year ended December 31, 1998 of Danmarks Nationalbank.

Basis of opinion

We planned and conducted our audit in continuation of the audit performed by the Bank's internal audit and in accordance with the auditing standards generally accepted in Denmark to obtain reasonable assurance that the annual accounts are free of material misstatements. Based on an evaluation of materiality and risk, we have tested the basis and documentation for the amounts and disclosures in the annual accounts. Our audit included an assessment of the accounting policies applied and estimates made. In addition we have evaluated the overall adequacy of the presentation of information in the annual accounts.

Our audit has not resulted in any qualifications.

Opinion

In our opinion the annual accounts have been prepared in accordance with the Danmarks Nationalbank Act and Danmarks Nationalbank's By-Laws and reflect the income and expenses for the year and the assets and liabilities as at December 31, 1998.

Copenhagen, February 15, 1999

Sv. Ørjan Jensen, State-Authorized Public Accountant

John Gath, State-Authorized Public Accountant

These accounts, audited in the manner prescribed by the By-Laws of Danmarks Nationalbank, are hereby adopted by the Board of Directors.

Copenhagen, March 18, 1999

Hans E. Zeuthen Helle Bechgaard Michael Dithmer

Jacob Buksti Pia Christmas-Møller Uffe Ellemann-Jensen Jørgen Estrup Bent le Fèvre

Knud Koch Jensen Jette W. Knudsen Kjeld Larsen Jes Lunde Harry Nicolaisen B. Frank Nielsen

Kirsten Nielsen Karsten Olsen Jan Petersen Anders Fogh Rasmussen Erik B. Rasmussen

Jens Rostrup-Nielsen Gitte Seeberg Kirsten Stallknecht Helge Sørensen Finn Thorgrimson Margit Vogensen

Appendix

Press Releases

INTEREST-RATE CHANGES

May 5, 1998 on interest rate increase

With effect from 6 May 1998 the discount rate will be raised by $\frac{1}{2}$ per cent to 4 per cent. The rate of interest on the banks' current accounts with the Nationalbank is also raised by $\frac{1}{2}$ per cent to 4 per cent. On 6 May the rate of interest on the Nationalbank's certificates of deposit and the repo rate will be 4.25 per cent, an increase of 0.50 per cent.

During recent months the Danish krone has tended to weaken. Since February the Nationalbank has sold foreign exchange to support the krone. Since the beginning of April the tendency has been more pronounced and the sale amounted to DKK 16 billion in April. The sale of foreign exchange has continued in May. The foreign-exchange reserve is, however, still substantial, more than DKK 100 billion.

The objective of the foreign-exchange-rate policy is to maintain a stable krone rate against the D-mark and the other core currencies. This is achieved through the use of the short-term interest rates and interventions in the foreign exchange market.

The continuing and increasing requirement to support the krone through sale of foreign exchange during recent months has made it necessary to increase the Nationalbank's interest rates.

For further information please contact Ms Kirsten Mordhorst on telephone +45 33 63 60 21.

May 29, 1998 on interest rate decrease

Effective from today the Nationalbank's discount rate is lowered by $\frac{1}{4}$ per cent to $3\frac{3}{4}$ per cent. Likewise, the rate of interest on the banks' current accounts with the Nationalbank is lowered by $\frac{1}{4}$ per cent to $3\frac{3}{4}$ per cent. The rate of interest on certificates of deposit and repurchase agreements is also lowered by 0.25 per cent to 4.00 per cent.

In April and the beginning of May the foreign-exchange market was affected by uncertainty prior to the referendum on the Amsterdam Treaty. The Nationalbank's interest rate increase on 5 May stabilized the market and in May the Nationalbank's purchases and sales of foreign exchange have virtually balanced.

The clarification of the situation after the referendum provides the basis for lowering the Nationalbank's interest rates.

For further information please contact Ms Kirsten Mordhorst on telephone +45 33 63 60 21.

September 18, 1998 on interest rate increase

The discount rate will be increased by $\frac{1}{2}$ per cent to $4\frac{1}{4}$ per cent and likewise the rate of interest on the banks' current accounts with the Nationalbank is increased by $\frac{1}{2}$ per cent to $4\frac{1}{4}$ per cent. The rate of interest on the Nationalbank's certificates of deposit and the repo rate will be increased by 1.00 per cent to 5.00 per cent. The interest rate increases will be effective from Monday 21 September 1998.

The background for the interest rate increase is that during the recent turbulence on international markets the Nationalbank has undertaken significant sales of foreign exchange to stabilize the exchange rate of the krone.

For further information please contact Ms Kirsten Mordhorst on telephone + 45 33 63 60 21.

November 5, 1998 on interest rate decrease

Effective from today the Nationalbank's discount rate is lowered by $\frac{1}{4}$ per cent to 4 per cent. Likewise, the rate of interest on the banks' current accounts with the Nationalbank is lowered by $\frac{1}{4}$ per cent to 4 per cent. The rate of interest on repurchase agreements and certificates of deposit is also lowered by 0.25 per cent to 4.40 per cent.

The background to the lowering of the interest rates is the development on the foreign-exchange market, where the Nationalbank has purchased foreign exchange in the recent period.

For further information please contact Ms Kirsten Mordhorst on telephone +45 33 63 60 21.

December 3, 1998 on interest rate decrease

With effect from 4 December 1998 the Nationalbank's discount rate will be lowered by $\frac{1}{2}$ per cent to $3\frac{1}{2}$ per cent. Likewise, the rate of interest on the banks' current accounts with the Nationalbank is lowered by $\frac{1}{2}$ per cent to $3\frac{1}{2}$ per cent. The rate of interest on repurchase agreements and certificates of deposit is lowered by 0.30 per cent to 3.95 per cent.

The lowering of the interest rates should be viewed against the background of the reduction of interest rates by the central banks of the future euro-area countries.

For further information please contact Ms Kirsten Mordhorst on telephone +45 33 63 60 21.

FOREIGN-EXCHANGE RATES

March 16, 1998 on realignment of exchange rates within the EMS

As a consequence of the realignment of exchange rates within the European Monetary System (EMS) the central rate of the Irish pound has been revalued by 3 per cent.

The Greek drachma has joined the Exchange-Rate Mechanism of the EMS with a fluctuation band of +/-15 per cent.

As from Monday, March 16, 1998 the following intervention rates between Danmarks Nationalbank and foreign-exchange dealers apply to the Irish pound and the Greek drachma.

Danish kroner per 100 units	Lower limit	Upper limit
Irish pound	815.774	1,099.95
Greek drachma	1.81948	2.45331

The intervention rates between the other ERM currencies will remain unchanged.

This implies adjustment of the central rates of all ERM currencies vis-à-vis the ECU. The new central rates are as follows:

Denmark	1 ECU =	7.54257	DKK
Germany	1 ECU =	1.97738	DEM
France	1 ECU =	6.63186	FRF
Belgium	1 ECU =	40.7844	BEF
Netherlands	1 ECU =	2.22799	NLG
Ireland	1 ECU =	0.796244	IEP
Spain	1 ECU =	168.220	ESP
Portugal	1 ECU =	202.692	PTE
Austria	1 ECU =	13.9119	ATS
Finland	1 ECU =	6.01125	FIM
Italy	1 ECU =	1957.61	ITL
Greece	1 ECU =	357.000	GRD

The theoretical central rate for the pound sterling, which does not participate in the Exchange-Rate Mechanism, is as follows:

UK	1 ECU =	0.653644	GBP
----	---------	----------	-----

September 8, 1998 on Danmarks Nationalbank's exchange rates after January 1, 1999

With effect from January 1, 1999 11 EU member states will introduce the single currency, the euro. As from January 4, 1999 Danmarks Nationalbank will therefore adjust the daily list of exchange rates, and publish a

rate for Danish kroner per 100 euro. The exchange rate for the European currency unit, the ECU, will lapse simultaneously.

The Nationalbank's exchange rates are published at approximately 12.00 noon and are based on market conditions at 11.30 a.m. As from January 4, 1999 the exchange-rate list will include the following currencies:

Euro area	euro	EUR
USA	dollars	USD
Great Britain	pounds sterling	GBP
Sweden	kronor	SEK
Norway	kroner	NOK
Iceland	kroner	ISK
Switzerland	francs	CHF
Greece	drachmas	GRD
Canada	dollars	CAD
Japan	yen	JPY
Australia	dollars	AUD
New Zealand	dollars	NZD
Special drawing rights (calculated)	SDR	XDR

Since the present notes and coins will circulate in the euro area until 2002 during this period the Nationalbank will calculate and publish exchange rates for the previous national currencies. The conversion rates between these currencies and the euro will be irrevocably fixed on January 1, 1999, and the exchange rates for the national currency units in the euro countries will be calculated by the Nationalbank on the basis of the euro rate and the official conversion rates.

These calculated exchange rates will comprise:

Germany	marks	DEM
France	francs	FRF
Netherlands	guilders	NLG
Belgium	francs	BEF
Italy	lire	ITL
Finland	markka	FIM
Spain	pesetas	ESP
Austria	schillings	ATS
Portugal	escudos	PTE
Ireland	punds	IEP

Further information can be obtained from Frank Nielsen on telephone (+45) 33 63 67 30.

December 31, 1998 on the krone's central rate and fluctuation band in ERM II

As from 1 January 1999 the krone will participate in ERM II, the new EU exchange-rate mechanism. Following the adoption of the fixed conversion rates between the euro and the national currencies of the countries introducing the euro as from 1 January 1999, Denmark, Greece, the euro countries and the European Central Bank, ECB, today fixed the central rates of the krone and the drachma against the euro. The calculation of the krone's central rate against the euro in ERM II is based on its previous central rate against the D-mark in the exchange-rate mechanism of the EMS, namely 381.443 DKK per 100 DEM and the conversion rate between D-mark and euro:

Central rate 746.038 DKK per 100 EUR

The fluctuation band of the krone has been fixed at +/-2.25 per cent and the intervention rates are as follows:

Selling rate 762.824 DKK per 100 EUR

Buying rate 729.252 DKK per 100 EUR

The fixed conversion rates between the national currencies of the euro countries and the euro are stated on page 2.

Information on the ERM II is available at Danmarks Nationalbank's website, the section entitled "About us", at the address:

www.nationalbanken.dk.

For further information, please contact Bjarne Skaftø on telephone +45 33 63 60 22.

Conversion rates

The irrevocably locked conversion rates between the euro and the currencies of the member states introducing the euro are as follows:

1 euro =	40.3399	Belgian francs
=	1.95583	D-marks
=	166.386	Spanish pesetas
=	6.55957	French francs
=	0.787564	Irish pounds
=	1936.27	Italian lire
=	40.3399	Luxembourg francs
=	2.20371	Dutch guilders
=	13.7603	Austrian schillings
=	200.482	Portuguese escudos
=	5.94573	Finnish markka

TURNOVER IN THE FOREIGN-EXCHANGE MARKET

September 29, 1998

In April and June 1998 Danmarks Nationalbank, in cooperation with the 16 largest Danish banks, carried out a survey of the Danish foreign-exchange market and of the market for financial derivatives. The turnover in these markets was investigated in April and statistics for the outstanding amounts related to financial derivatives were compiled at the end of June.

The Nationalbank's survey is part of a major international survey conducted every three years. The number of participating countries has been increased considerably from 26 in 1995 to 40 in the present survey. The surveys in the various countries are coordinated by the Bank for International Settlements, BIS, in Basle.

Today most of the participating central banks publish the key figures for the part of the survey which concerns the turnover in the foreign-exchange market and the markets for financial derivatives. The statistics for the outstanding amounts related to financial derivatives will be published as soon as they are available.

In the following the Nationalbank provides an overview of the Danish turnover statistics. Once all Danish data has been processed – probably in October or November – the Nationalbank will issue a detailed statement.

Information on the results of the market surveys in other countries will in many cases be available on the home pages of the respective central banks. These home pages will be listed by BIS at:

www.bis.org/publ/r_fx98.htm.

During October 1998 BIS will issue a statement on the size of the global foreign-exchange market. It is not possible to calculate the size of the global market by simple addition of the national data, since this would entail considerable duplicate counting of transactions between banks participating in the survey in their individual countries. During the spring of 1999 BIS will issue a publication with a detailed overview of the data for all countries.

Turnover in the Danish market

To facilitate comparison with other countries' statistics trading is compiled in USD. The compilation is made on a net basis, i.e. adjustment is made for duplicate reporting of transactions between two Danish banks which both participate in the survey. Transactions between various branches of a bank are included to the extent that they took place on market terms.

NET TURNOVER IN THE FOREIGN-EXCHANGE MARKET BY TRANSACTION TYPE Table 1

USD billion	April 1998	April 1995	April 1992	April 1989	April 1998	April 1995	April 1992	April 1989
	Total				Per banking day			
Spot transactions	120	151	199	121	6.3	8.9	10.5	6.4
Forward transactions .	21	26	38	25	1.1	1.5	2.0	1.3
Fx swaps	378	342	273	105	19.9	20.1	14.4	5.5
Currency swaps	2	14	na	na	0.1	0.9	na	na
Options	12	7	22	3	0.7	0.4	1.2	0.2
Foreign-exchange trading, total.....	533	540	532	254	28.1	31.8	28.1	13.4

Note: Na: Data not available.

The Nationalbank estimates that the participating banks cover approximately 95 per cent of the total Danish trading volume.

In April 1998 trading by Danish participants in the foreign-exchange market totalled USD 28.1 billion per banking day. This is slightly less than in 1995, but on a par with the statistics for 1992 and considerably above the 1989 figures. The data for 1989 and 1992 is not fully comparable with the more recent compilations.

The distribution of foreign-exchange turnover per banking day by transaction type shows a relatively pronounced shift whereby spot and forward trading has declined while swap trading has been almost unchanged. The background to these changes is probably the greater stability of the krone vis-à-vis the leading European currencies. For most European currencies this has reduced the need for foreign-exchange transactions to hedge the exchange-rate risk. For example, spot and forward transactions in DEM have decreased relatively strongly, whereas trading in the currencies still subject to exchange-rate fluctuation, primarily USD, has risen. The extensive trading in swaps reflects the high international investment activity, since swap transactions are widely used to hedge the exchange-rate risk on such investments.

NET TURNOVER IN INTEREST-RATE DERIVATIVES Table 2

USD billion	April 1998	April 1995	April 1998	April 1995
	Total		Per Banking day	
FRAs	64	37	3.4	2.2
Interest-rate swaps	13	4	0.7	0.2
Interest-rate options (OTC)	2	4	0.1	0.2
Interest-rate derivatives trading, total .	79	45	4.2	2.6

Trading in interest-rate derivatives amounted to USD 4.2 billion per banking day, which is a strong increase on 1995. The volume of interest-rate derivative trading was not compiled in the 1989 and 1992 surveys.

For further information please contact Helge Fosgaard on telephone (+45) 33 63 67 39.

NEW 1,000-KRONE NOTE

June 15, 1998

On September 18, 1998 the Nationalbank will issue a new 1,000-krone note.

For the first time on a Danish banknote the face of the note features a double portrait. It shows the painters Anna and Michael Ancher. They are both well-known for their paintings which in particular depict everyday life at Skagen (the Skaw). The double portrait is inspired by two pictures painted by P. S. Krøyer in 1884. These paintings are displayed at Skagens Museum.

The battle scene on the reverse of the 1,000-krone note is inspired by a relief from a stone monument in Bislev Church near Nibe.

The principal colour of the new note is red. With dimensions of 165 x 72 mm it is 1 cm longer than the 500-krone note. All notes in the new series are of the same height.

The 1,000-krone note is the third note in the new series. The remaining two notes, the 50- and 100-krone notes, are expected to be issued in 1999.

The new note series is being issued because new developments in graphic technology have made it necessary to improve the special features to protect the notes against counterfeiting.

The faces of all the banknotes in the new series show portraits of Danish women and men who have made a contribution to art or science. The motifs on the reverse are inspired by stone reliefs in Danish churches.

The 1,000-krone note will be presented at a press conference at Denmark's Nationalbank shortly before it is issued. A folder describing the security features of the note will be distributed to all households. The folder will also be available at banks. Information will furthermore be presented via TV and the Internet.

The old 1,000-krone notes will remain legal tender but will be withdrawn as they are returned to the Nationalbank. There are 19 million 1,000-krone notes in circulation.

For further information please contact Ms Kirsten Mordhorst on telephone +45 33 63 60 21.

DANMARKS NATIONALBANK ON THE INTERNET

May 25, 1998

Danmarks Nationalbank has launched its homepage on the Internet. The address is:

www.nationalbanken.dk

The website presents an overview of the functions of Danmarks Nationalbank and provides access to the bank's press releases, publications, statistical data, etc. The website thus improves the access to information on the Nationalbank's tasks and policies and on Danish banknotes and coins.

The material is presented so as to meet the general public's need for information of a general nature and furthermore to provide the more detailed information required by professional users. Most of the website is available in an English version. The key areas are described below:

Welcome

Practical information and links to other websites.

About us

The tasks of the Nationalbank and its special position as Denmark's central bank are described. The management of the Nationalbank is presented and an outline is given of its internal organization. The history of the bank is related to economic-policy events during the last 200-300 years. The Nationalbank's building is also described, including photographs.

Press releases

The website includes the most recent press releases from the Nationalbank as well as some of the speeches made by the Governors. The aim is for material to be available on the Internet as soon as possible after it is published.

Publications

The Nationalbank's publications are presented as full-text versions.

Statistics

This section presents financial statistics and statistical information on external payments.

Markets

This section presents the information which the Nationalbank makes available on a day-to-day basis concerning e.g. exchange rates and interest rates.

Notes and coins

The Nationalbank is currently issuing new banknotes. This section presents the new note series. The present coin series and the most recent commemorative coin issues are also shown.

Government debt

The Nationalbank is responsible for the administration of domestic and foreign central-government borrowing. This section describes the principles for government debt management.

For further information, please contact Mr. Bjarne Skafte on telephone +45 33 63 60 22.

UNCERTAINTY CONCERNING THE COMPILATION OF THE BALANCE OF PAYMENTS

August 14, 1998

The difference between the compilation of the external payments statistics by Danmarks Nationalbank and of the balance of payments by Statistics Denmark has recently given rise to justified uncertainty concerning the development in the balance of payments. For the 12-month period from June 1997 to May 1998 the Nationalbank's external payments statistics show a surplus of kr. 8.6 billion, whereas the compilation of the balance of payments by Statistics Denmark shows a deficit of kr. 4.2 billion. The difference is thus kr. 12.8 billion.

The difference is due to different compilation principles, as well as differences in the underlying data.

The most fundamental difference in the compilation principles is that the external payments statistics record revenues and disbursements in connection with trade of goods at the time of payment, whereas in the balance of payments they are recorded at the time of transaction, i.e. when the goods are actually imported or exported. Due to the extensive use of supplier credits payment will typically take place some months after the date of transaction.

Normally the difference in the date of registration will be of no great significance when viewed over a 12-month period. However, for some periods the difference is considerable. In the actual situation attention should be drawn to the fact that the negative impact of the labour market conflict on the balance of payments is reflected immediately in Statistics Denmark's statistics for April and May, but will only have a full impact on the external payments statistics in the coming months, as the payments are effected.

Furthermore, there are a number of other small differences in the compilation methods, including differences concerning the compilation of interest and dividend.

Differences in the underlying data present the greatest problem. The foreign-trade statistics of Statistics Denmark are based on reports from the customs authorities and as from 1993 also from business enterprises. The Nationalbank's foreign-exchange statistics are based on payments via Danish banks.

The problem consists of a lack of consistency between the two types of report and is shown by the fact that since 1993 goods payments in the external payments statistics and Statistics Denmark's statistics for import and export of goods have not developed in parallel, in contrast to previously.

This problem is in fact not unique to Denmark. Other EU member states face problems of the same type.

Danmarks Nationalbank and Statistics Denmark have worked intensively on these problems since they became apparent in 1995. This work is coordinated by a liaison group which also includes representatives from the Ministry of Economic Affairs.

At Danmarks Nationalbank extensive reorganization of the external payments statistics has been under preparation for some time. The new system will be implemented in October 1998, followed by a period of introduction. This reorganization will significantly improve opportunities for detailed comparison of the external payments statistics with Statistics Denmark's import and export data. As a consequence of the differing registration principles it is, however, required that the new system be run in and have been in operation for a certain period before any meaningful comparisons can be made.

At Statistics Denmark, an extensive range of controls of data on foreign trade have been made since 1995, including by comparing the figures with information from the VAT system and by comparison with other countries' statistics for trade with Denmark. The results of these controls are reported on an ongoing basis in "The quality of the foreign-trade statistics", which is available in Danish.

Danmarks Nationalbank and Statistics Denmark are aware of the uncertainty entailed by these differing statistics. Work will be done to settle this problem in 1999 when the detailed analyses of the correlation between goods payments in the external payments statistics and Statistics Denmark's data on foreign trade can take place.

The Independence of the Central Banks and their Integration in the European System of Central Banks

In addition to the criteria for economic convergence the Maastricht Treaty also stipulates that each member state shall ensure that its national legislation, including the statutes of its national central bank, is compatible with the Treaty and the statutes of the European System of Central Banks, ESCB, and the European Central Bank, ECB.

"Compatibility" means that the Treaty does not require harmonisation and that national particularities may continue to exist. However, the requirement of compatibility has called for the adaptation of national legislation in all member states which have adopted the euro, and in Sweden and Greece. The United Kingdom is subject to a special exemption and is therefore under no obligation to adapt its national legislation.

The requirements for legal convergence have been specified by the European Monetary Institute, EMI, in annual reports, most recently the Convergence Report of March 1998. As for legal convergence a distinction is made between the *independence* of the central banks and their *legal integration* in the ESCB. The deadline for compliance with the independence criterion was at the establishment of the ECB, while the deadline for compliance with the legal integration criterion was 1 January 1999 for the member states which have adopted the single currency, the euro.

Independence of the central banks

This requirement entails independence of the political system, including Community institutions and the governments of the member states, in the central banks' conduct of monetary policy.

The EMI has prepared a list of characteristic features of central-bank independence distinguishing between institutional, personal and financial independence.

- *Institutional independence* is expressly referred to in the Maastricht Treaty as the independence of all external bodies, including Community institutions and the governments of the member states. National legislation stipulating that a third party may instruct the central bank

or must be consulted prior to important central-bank decisions can therefore not be maintained.

- *Personal independence* concerns security of tenure for members of the ESCB's decision-making bodies. The statute of the ESCB stipulates a minimum term of office for central-bank governors of five years. A central-bank governor may be dismissed only on the grounds stated in the statute. This protection also includes dismissal of other members of decision-making bodies of the central banks if such bodies are involved in ESCB-related tasks.
- *Financial independence* ensures that the central banks are able to avail itself of the appropriate means to carry out their ESCB-related tasks properly.

Legal integration in the ESCB

Legal integration comprises adaptation of national legislation to enable the central banks to execute their tasks in accordance with the ECB's guidelines and instructions. This is a prerequisite for the effective functioning of the integrated system of central banks.

In the Convergence Report of March 1998 the EMI states relevant provisions in the statutes of the national central banks and other legislation which must typically be assessed in relation to legal integration in the ESCB. Such provisions in the statutes are in particular related to objectives and tasks, monetary policy instruments and financial issues such as auditing, accounts, capital subscriptions, transfer of official foreign-reserve assets and monetary income. Other relevant statutory provisions are typically provisions regulating the exchange-rate policy which will be conducted at Community level on participation in the third stage.

Assessment of Danmarks Nationalbank in the convergence reports

Although Denmark does not participate in the third stage of EMU Danmarks Nationalbank must comply with the independence criterion. In their convergence reports from March 1998 the EMI and the European Commission found that the Danish central bank statutes are compatible with the requirement for independence as stipulated in the Maastricht Treaty. The requirements for legal integration do not apply to the Nationalbank due to Denmark's non-participation in the single currency.

The Statutory Basis for the Financial Sector

Amendment of the EC directives on the taking up and pursuit of the business of credit institutions, on a solvency ratio for credit institutions and on the capital adequacy of investment firms and credit institutions

On 22 June 1998 the EU member states adopted a collective package of three directives amending the above directives. The new rules contain provisions on e.g. the capital of the over-the-counter financial contracts of credit institutions. In addition, the rules extend the existing transition scheme allowing member states to stipulate more lenient capital requirements for lending by credit institutions for office and commercial properties. Furthermore, the rules introduce the use of internal risk management models to calculate the market risks associated with holdings of raw materials and raw materials-related financial contracts.

EC directive on settlement finality in payment and securities settlement systems ("the finality directive")

Already in October 1997 the EU member states reached agreement in principle on this directive, which was adopted finally on 19 May 1998. The objectives of the directive include reduction of the systemic risk inherent in payment and securities settlement systems and it ensures among other things smooth and proper functioning of the TARGET payment system. The number of cross-border payment transactions is growing every year, with an inherent growing risk of legal problems if senders and recipients of payments are subject to different insolvency proceedings rules. The directive provides for a transfer order to be recognised as final in all EU member states if given before insolvency proceedings are initiated against the sender. At the same time, the directive provides for it to be possible to choose within a payment system which member state's legal system shall be applied to the payments.

Proposal for amendment of the EC directive in the field of undertakings for collective investment in transferable securities (UCITS)

On 17 July 1998 the European Commission submitted two separate directive proposals to amend the current directive from 1985. These proposals include such issues as approval, supervision, investment policy and transparency provisions for UCITS offering their shares for sale to the public and whose only objective is to invest in securities. The Commis-

sion's first proposal focuses on the product offered. The primary objective is to extend the scope of the directive to include other collective investment institutions. These are institutions investing in other liquid financial assets than securities, e.g. money-market instruments, bank deposits and standardised futures and options. The second proposal focuses on the provider. The primary objective is to introduce actual regulation of the administration companies of such institutions in order to e.g. safeguard the right of free establishment in other member states (the EU passport). The proposal also contains draft provisions on the issue of simplified prospectuses.

The fundamental philosophy behind the European Commission's proposals, including extension of the scope of the activities of administration companies, will lead to an improved market structure subject to greater competition. However, it must be ensured that there will be no confusion between the capital management activities of the administration company and the activities of the bank undertaking the task to hold the UCITS' securities (the depositary). Finally, other revisions of the directive should be made with due consideration of the requirement to protect investors and to strengthen the transparency of the market.

Proposal for an EC directive on access to take up and pursue the business of electronic credit institution and the supervision of such institutions

On 21 September 1998 the European Commission submitted a directive proposal in this area. It is primarily directed at issuers of electronic money. The proposal envisages that electronic money may in future be issued by other parties besides credit institutions. All issuers will be designated credit institutions. This entails that they will be subject to financial supervision and to the rules on the "EU passport", i.e. the free right of establishment, free exchange of services and mutual recognition of supervision. They will also be subject to the provisions regulating the ECB's right to collect statistics and – in respect of institutions in the euro area – to the ECB's minimum reserve requirements. The Commission's proposal also sets the stage for issuers of electronic money to be subject to simple and more lenient capital requirements, but to more restrictive placement rules, than credit institutions. The background is the different balance-sheet structure, where liabilities consist of unredeemed electronic money. Very liquid placement of assets is an equivalent requirement. Finally, the European Commission's proposal comprises requirements of the management, business procedures, etc. of issuers, who will furthermore be subject to the EU money-laundering directive. According to the proposal a member state may impose more lenient requirements

on small national systems. Such systems will not be subject to the rules on the EU passport. Cf. also the account on p. 64.

Proposal for an EC directive on ensuring minimum effective taxation of income from savings within the Community

The European Commission submitted its proposal on 20 May 1998. The objective is to ensure minimum effective taxation of income from savings within the Community. The proposal is based on the co-existence model, which entails that a member state may choose *either* to withhold at source tax of 20 per cent on such payments to non-residents (within the EU) *or* to report such income to the tax authorities in the relevant member state. The proposal solely comprises the income of individuals resident in another member state.

Amendment of regulations concerning transaction parties and confidentiality

With effect from 1 January 1999 the special transaction-party concept in financial legislation is extended and specified via harmonised statutory amendments concerning banks, mortgage-credit institutes, institutional investors, investment companies, investment associations and special-purpose associations. These amendments implement a number of recommendations from a 1996 report on confidentiality and the concept of transaction parties in financial supervision legislation. The amendments concern primarily senior officers of business enterprises. Members of boards of directors, directors and other senior officers of financial institutions are now given the status of transaction parties with the resulting access to submit complaints concerning an injunction or enforcement notice from the Danish Financial Supervisory Authority to the person in question. On the other hand, under this amendment the customers of financial institutions are not given the status of transaction parties, since the decisions of the Financial Supervisory Authority are not directed at such customers. The amendments also specify the confidentiality provisions concerning the Danish Financial Supervisory Authority, including communication of confidential information to the Securities Market Council, the Auditors of Public Accounts and the Auditor-General. Under these amendments the confidentiality of the Financial Supervisory Authority does not lapse when consent is given by the person protected by the confidentiality.

The Whitsun package of economic measures

The Whitsun package amends a number of taxation laws and harmonises certain investment rules for institutional investors. The Real-Interest

Tax Act is replaced by a new Act on Taxation of Yields on Pension Savings providing for significantly altered taxation principles. First and foremost, the previous realisation principle applied to the valuation of the taxation basis of institutional investors is replaced by valuation at market prices (the stockpiling principle). In addition, the variable real-interest-tax rate is replaced by a fixed capital-yield tax of 26 per cent. The ceiling for equity investments is raised to 50 per cent and an equity yield tax of 5 per cent is introduced, cf. p. 23 and p. 61ff.

Amendment of the Act on Danish Commercial Banks and Savings Banks, etc.

This statutory amendment entered into force on 1 January 1999, improving inter alia the statutory basis for management of banking crises. For example, a proposal was adopted which facilitates and speeds up the decision-making process regarding reconstruction, etc., including via enforced redemption of minority shareholders. In addition, certain management provisions and provisions regarding limitation of voting rights for savings banks which are limited-liability companies were amended to provide for the merger of Realkredit Danmark, a member-based mortgage-credit institute, and BG Bank, a limited-liability savings bank. Furthermore, a number of provisions regarding the structure of groups were specified so that such provisions are now to a great extent harmonised in financial legislation.

Amendment of the Securities Trading Act (price manipulation and provision of margin)

This statutory amendment entered into force on 1 January 1999 and specifies the provisions of the Act in a number of areas, including as regards price manipulation. Price manipulation is now assessed according to an action's potential effect on the market price, irrespective of its actual effect on the price. This statutory amendment also introduces provisions on margin in accordance with the netting rules. This gives Danish banks an opportunity to connect to international payment and settlement systems. The division of competence between the Securities Market Council and the Financial Supervisory Authority was also specified in more detail.

Amendment of the Act on Investment Companies

This statutory amendment entered into force on 1 January 1999 and limits investment companies' access to ownership of real property. At the same time, investment companies and banks are granted the

exclusive right to conduct certain foreign-exchange spot transactions on behalf of customers, for investment purposes.

Act on a Guarantee Fund for Depositors and Investors

This Act entered into force on 15 October 1998 to implement the EC directive on investor guarantee schemes. This Act provides for overall regulation of guarantee schemes for depositors and investors. Both investors and depositors are now protected against losses by means of a common fund with separate departments for banks, mortgage-credit institutes and investment companies. The provisions on deposits of the previous Deposit Guarantee Fund were retained unchanged. The fund also ensures compensation for investors in investment companies and mortgage-credit institutes, etc. in the event of non-reimbursement of funds. In addition, the fund covers investor losses due to an institution's inability to return to the investor securities held, administered or managed by the institution. The fund may also participate in the liquidation of crisis-stricken institutions covered by the guarantee scheme.

Amendment of the Mortgage Credit Act

This statutory amendment entered into force on 1 January 1999 and simplifies a number of lending provisions, including for maximum maturity, repayment profile and loan ceilings.

The amendment specifies the regulations concerning the compulsory winding-up of mortgage-credit institutes in order to e.g. facilitate the international credit rating of Danish mortgage-credit bonds.

Amendment of the Act on Investment Associations and Special-Purpose Associations and new Regulation (transfer of investment departments and provisions concerning use of derivatives)

This statutory amendment entered into force on 1 January 1999 and provides for transfer of a separate department from one association to another association as a separate department without being subject to the split and merger provisions of the Act. Furthermore, in a regulation, which entered into force on 2 December 1998 the Danish Financial Supervisory Authority specified the regulations concerning use of derivatives by investment associations and special-purpose associations.

Proposal for amendment of the Payment Card Act (Section 20)

This bill provides for amendment of the special provision of Section 20 of the Act, which limits card issuers' access to charge fees from card recipients. In the first instance the amendment concerns card recipients

wishing to effect payments using payment cards on the Internet, etc. The remarks on the bill provide for abolition in the longer term of Section 20 on the condition of real competition on the market for payment cards, cf. p. 79.

Amendment of the Capital Gains Act, the Tax Administration Act and the Tax Enforcement Act (provisions in banks and mortgage-credit institutes, etc.)

This statutory amendment, which has not yet entered into force, will provide a clear statutory basis for deduction by banks and mortgage-credit institutes of losses on loans and guarantees, etc. This amendment to a large extent represents a codification of current practice, so that banks and mortgage-credit institutes may now deduct accounting provisions on the compilation of taxable income. The supervisory authority, usually the Financial Supervisory Authority, will oversee that provisions are made in accordance with accounting regulations. The EU will be notified of this amendment before it enters into force, in accordance with the provisions in the EC Treaty on aid granted by states.

Appendix of Tables

ANNUAL ACCOUNTS AND MONTHLY BALANCE SHEETS OF DANMARKS NATIONALBANK

Table 1

Kr. million	Assets				
	Stock of gold	Foreign assets	Assets deposited with the European Monetary Institute	Net assets with the IMF ¹⁾	Lending ²⁾
1988	4,595	59,063	10,454	3,709	1,712
1989	4,340	33,180	4,625	4,063	19,536
1990	3,720	52,707	5,200	3,053	6,246
1991	3,464	38,588	2,814	3,585	5,320
1992	3,456	63,540	2,757	3,503	29,132
1993	4,339	62,818	4,947	3,456	81,689
1994	3,790	44,658	3,460	3,723	61,749
1995	3,531	53,577	4,521	4,177	49,670
1996	3,652	73,624	4,979	4,598	49,659
1997	3,331	115,844	4,790	6,602	37,116
1998	3,934	89,416	-	9,330	40,225
1997 Jan.	3,665	83,190	5,394	4,507	56,782
Feb.	3,672	82,274	5,394	4,860	58,286
March	3,672	81,025	5,394	4,797	64,734
April	3,665	88,587	5,032	4,794	41,202
May	3,674	95,066	5,032	5,334	44,396
June	3,686	96,659	5,032	5,217	48,628
July	3,677	99,333	4,712	5,279	48,858
Aug.	3,680	99,377	4,712	5,300	44,337
Sept.	3,683	105,639	4,712	5,486	42,091
Oct.	3,693	123,675	4,783	5,374	22,938
Nov.	3,712	117,081	4,778	5,107	33,757
Dec.	3,718	114,392	4,778	6,223	36,836
1998 Jan.	3,416	137,662	4,941	8,744	46,026
Feb.	3,416	126,240	4,941	8,777	33,331
March	3,418	123,002	4,941	8,787	43,580
April	3,387	101,635	5,947	8,881	49,884
May	3,410	100,456	5,947	8,915	53,427
June	3,417	100,020	5,947	9,270	60,056
July	3,434	101,284	5,652	9,632	61,881
Aug.	3,434	79,268	5,652	9,304	67,766
Sept.	3,435	84,958	5,652	10,064	70,984
Oct.	3,487	79,810	5,593	10,014	69,135
Nov.	3,504	84,982	5,593	9,372	55,457
Dec.	4,320	87,835	44	9,568	40,344

Note: End of period. The annual figures are from the annual accounts of Danmarks Nationalbank. The monthly figures (also at end-December) are from the monthly balance sheets.

¹⁾ A specification of Denmark's account with the IMF is given in Table 10.

²⁾ A specification of the banks' accounts with the Nationalbank is given in Table 4.

³⁾ Until end-1990 including Post Giro funds. The amount stated under Assets in 1988 is Post Giro funds.

⁴⁾ In the period as from 1989 until end-1991 including bonds acquired in connection with bond-repurchase agreements.

⁵⁾ In 1992 written down by kr.100 million, equivalent to the value of uncashed 5- and 10-øre coins. Discontinued at end-1994 in accordance with the Maastricht Treaty and related Council regulation.

⁶⁾ As from 1992 guarantees are not included in the balance sheet.

⁷⁾ Until end-1991 including uncovered forward transactions not entered in the balance sheet as from 1992.

ANNUAL ACCOUNTS AND MONTHLY BALANCE SHEETS OF DANMARKS NATIONALBANK

Table 1

Assets						Kr. million
The government ³⁾	Bonds and shares ⁴⁾	Government guarantee for coin in circulation ⁵⁾	Guarantees ⁶⁾	Sundry debtors ⁷⁾	Total	
6,246	26,911	639	1,059	30,084	144,472	..... 1988
–	32,431	639	795	16,025	115,634	..... 1989
–	37,717	639	569	18,469	128,320	..... 1990
–	44,361	639	433	<u>12,327</u>	<u>111,531</u>	..... 1991
–	32,018	539	•	3,327	138,272	..... 1992
–	41,235	539	•	4,502	203,525	..... 1993
•	39,505	•	•	2,274	159,159	..... 1994
•	34,096	•	•	2,348	151,920	..... 1995
•	35,108	•	•	2,383	174,003	..... 1996
•	33,766	•	•	2,822	204,271	..... 1997
•	37,487	•	•	2,402	182,794	..... 1998
•	34,608	•	•	2,274	190,420	..... Jan. 1997
•	35,147	•	•	3,559	193,192	..... Feb.
•	35,244	•	•	2,625	197,491	..... March
•	34,973	•	•	2,423	180,676	..... April
•	35,350	•	•	2,349	191,201	..... May
•	34,944	•	•	2,569	196,735	..... June
•	33,944	•	•	2,975	198,778	..... July
•	35,231	•	•	2,981	195,617	..... Aug.
•	34,950	•	•	3,379	199,943	..... Sept.
•	34,201	•	•	3,672	198,336	..... Oct.
•	34,606	•	•	2,105	201,147	..... Nov.
•	33,589	•	•	2,287	201,824	..... Dec.
•	34,631	•	•	2,282	237,701	..... Jan. 1998
•	34,647	•	•	2,221	213,573	..... Feb.
•	35,538	•	•	2,104	221,369	..... March
•	35,081	•	•	1,756	206,571	..... April
•	35,179	•	•	1,544	208,878	..... May
•	36,010	•	•	1,600	216,321	..... June
•	35,745	•	•	1,456	219,085	..... July
•	36,384	•	•	1,668	203,476	..... Aug.
•	37,429	•	•	2,252	214,776	..... Sept.
•	37,053	•	•	3,408	208,501	..... Oct.
•	37,792	•	•	1,900	198,601	..... Nov.
•	36,742	•	•	1,623	180,477	..... Dec.

ANNUAL ACCOUNTS AND MONTHLY BALANCE SHEETS OF DANMARKS NATIONALBANK

Table 1

Kr. million	Liabilities					
	Notes in circulation	Coin in circulation	Foreign liabilities	Allocation of SDRs in the IMF ¹⁾	Deposits ²⁾	Certificates of deposit ²⁾
1988	22,094	1,776	1,582	1,652	7,865	•
1989	23,290	1,755	1,304	1,553	8,977	•
1990	24,453	2,530	1,361	1,470	13,114	•
1991	25,565	2,646	3,888	1,514	18,125	•
1992	25,391	2,629	28,292	1,539	4,800	5,743
1993	26,880	2,776	790	1,664	5,455	27,812
1994	29,708	2,980	1,537	1,589	4,591	25,979
1995	31,434	3,222	2,200	1,474	3,219	33,813
1996	33,187	3,426	1,634	1,527	28,068	30,865
1997	35,079	3,631	876	1,648	33,863	52,738
1998	37,199	3,816	1,253	1,606	21,231	34,752
1997 Jan.	31,650	3,332	459	1,527	14,689	68,305
Feb.	31,511	3,330	465	1,527	11,260	55,129
March	32,773	3,399	480	1,527	19,350	50,068
April	32,786	3,404	261	1,527	25,363	53,582
May	33,241	3,459	269	1,527	12,352	47,697
June	33,735	3,496	554	1,527	27,258	42,022
July	33,888	3,490	601	1,527	31,393	60,430
Aug.	33,187	3,502	815	1,527	19,478	60,409
Sept.	33,027	3,491	1,220	1,527	29,148	53,549
Oct.	33,248	3,482	1,386	1,527	19,751	77,674
Nov.	33,627	3,529	1,880	1,527	15,947	59,128
Dec.	35,079	3,631	875	1,527	33,863	52,738
1998 Jan.	33,424	3,523	442	1,648	31,421	69,600
Feb.	33,118	3,517	568	1,648	20,636	62,862
March	33,587	3,581	594	1,648	37,132	50,361
April	35,311	3,647	773	1,648	32,542	42,570
May	35,340	3,690	866	1,648	21,329	30,958
June	35,929	3,718	751	1,648	37,168	34,687
July	35,823	3,714	285	1,648	21,008	62,943
Aug.	35,453	3,712	6,758	1,648	26,328	32,890
Sept.	35,132	3,695	7,845	1,648	35,073	22,943
Oct.	35,042	3,682	1,347	1,648	28,828	40,694
Nov.	35,624	3,732	1,564	1,648	26,842	35,087
Dec.	37,199	3,815	1,254	1,648	21,231	34,752

Cf. the Note and notes 1)-6) to the Table of Assets.

ANNUAL ACCOUNTS AND MONTHLY BALANCE SHEETS OF DANMARKS NATIONALBANK

Table 1

Liabilities							Kr. million
The government ³⁾	Guarantees ⁶⁾	Sundry creditors ⁷⁾	General Capital Fund and Reserve Fund	Value adjustment reserve	Reserve against loss on assets	Total	
50,384	1,059	28,950	300	•	28,810	144,472	..... 1988
34,504	795	14,346	300	•	28,810	115,634	..... 1989
38,405	569	17,362	300	•	28,756	128,320	..... 1990
16,010	433	<u>10,698</u>	300	•	32,352	<u>111,531</u>	..... 1991
35,075	•	495	300	•	34,008	138,272	..... 1992
94,548	•	573	300	•	42,727	203,525	..... 1993
56,910	•	1,080	300	•	34,485	159,159	..... 1994
38,808	•	1,523	300	•	35,927	151,920	..... 1995
34,995	•	1,548	300	1,093	37,359	174,003	..... 1996
33,954	•	1,333	300	2,107	38,742	204,271	..... 1997
37,131	•	2,333	300	3,101	40,072	182,794	..... 1998
26,925	•	7,306	300	•	35,927	190,420	..... Jan. 1997
46,265	•	7,478	300	•	35,927	193,192	..... Feb.
49,712	•	1,430	300	1,093	37,359	197,491	..... March
23,580	•	1,421	300	1,093	37,359	180,676	..... April
52,134	•	1,770	300	1,093	37,359	191,201	..... May
47,391	•	2,000	300	1,093	37,359	196,735	..... June
25,936	•	2,761	300	1,093	37,359	198,778	..... July
34,886	•	3,062	300	1,093	37,359	195,617	..... Aug.
36,093	•	3,135	300	1,093	37,359	199,943	..... Sept.
18,786	•	3,730	300	1,093	37,359	198,336	..... Oct.
42,624	•	4,133	300	1,093	37,359	201,147	..... Nov.
30,727	•	4,632	300	1,093	37,359	201,824	..... Dec.
52,105	•	6,787	300	1,093	37,359	237,701	..... Jan. 1998
45,685	•	6,787	300	1,093	37,359	213,573	..... Feb.
52,085	•	1,232	300	2,107	38,742	221,369	..... March
47,520	•	1,411	300	2,107	38,742	206,571	..... April
71,951	•	1,947	300	2,107	38,742	208,878	..... May
59,021	•	2,250	300	2,107	38,742	216,321	..... June
49,802	•	2,713	300	2,107	38,742	219,085	..... July
52,343	•	3,195	300	2,107	38,742	203,476	..... Aug.
63,583	•	3,709	300	2,107	38,742	214,776	..... Sept.
51,705	•	4,407	300	2,107	38,742	208,501	..... Oct.
48,001	•	4,953	300	2,107	38,742	198,601	..... Nov.
34,027	•	5,402	300	2,107	38,742	180,477	..... Dec.

SPECIFICATION OF NOTES IN CIRCULATION

Table 2

Kr. million	Kr. 1000	Kr. 500	Kr. 200	Kr. 100	Kr. 50	Total
1988	11,547	3,361	•	5,735	399	21,042
1989	12,410	3,433	•	5,955	413	22,211
1990	13,167	3,688	•	6,544	588	23,987
1991	14,029	3,851	•	6,668	629	25,177
1992	14,164	3,806	•	6,402	618	24,990
1993	15,386	3,983	•	6,495	655	26,519
1994	17,294	4,693	•	6,646	695	29,328
1995	18,238	5,307	•	6,759	737	31,041
1996	19,280	5,819	•	6,926	778	32,803
1997	19,589	6,556	1,618	6,119	799	34,681
1998	19,787	8,088	2,182	5,881	851	36,789

Note: End of year. Notes in circulation as entered in the Nationalbank's balance sheet furthermore includes the special notes circulating on the Faroe Islands (on 31 December, 1998: kr. 201 million) and 20-, 10- and 5-krone notes.

SPECIFICATION OF COIN IN CIRCULATION

Table 3

Kr. million	Kr.20	Kr.10	Kr.5	Kr.2	Kr.1	50 øre	25 øre	Total
1988	•	569	397	•	470	•	174	1,610
1989	•	620	383	•	454	44	135	1,636
1990	746	601	392	•	459	64	126	2,388
1991	845	596	392	•	467	77	131	2,508
1992	893	599	394	•	471	88	134	2,579
1993	932	613	399	170	381	94	138	2,727
1994	1,013	656	421	214	378	105	145	2,932
1995	1,122	697	442	248	385	112	152	3,158
1996	1,211	738	462	280	393	121	158	3,363
1997	1,299	773	483	310	401	126	163	3,555
1998	1,371	813	504	337	413	134	169	3,741

Note: End of year. Coin in circulation as entered in the Nationalbank's balance sheet furthermore includes 200-krone coins (commemorative coins) and 2-krone coins put into circulation up to end-1959.

THE BANKS' BALANCES WITH THE NATIONALBANK

Table 4

Kr. million	Certificates of deposit ¹⁾	Deposits	Loans ²⁾	Total net position	Lending concerning decentralized banknote holdings	Bond-repurchase accounts ³⁾
1988	•	5,884	1,312	4,572	•	•
1989	•	351	18,388	- 18,037	20	6,376
1990	•	1,748	3,055	- 1,307	1,013	8,764
1991	•	14,369	5	14,364	1,085	2,016
1992	5,741	3,338	23,781	- 14,702	1,073	•
1993	27,783	3,387	77,937	- 46,767	1,267	•
1994	25,851	2,685	55,937	- 27,401	1,338	•
1995	33,570	1,867	43,969	- 8,532	1,361	•
1996	30,617	15,215	33,735	12,097	1,438	•
1997	52,111	17,976	19,817	50,270	1,655	•
1998	34,218	12,407	29,587	17,038	2,912	•
1997 Jan.	68,017	1,087	39,908	29,196	1,109	•
Feb.	54,882	1,311	44,557	11,636	1,156	•
March	49,802	1,225	43,066	7,961	1,210	•
April	53,126	17,601	29,944	40,783	1,341	•
May	47,257	1,452	29,442	19,267	1,473	•
June	41,715	9,108	26,695	24,128	1,393	•
July	59,744	18,295	32,581	45,458	1,622	•
Aug.	59,765	1,774	23,590	37,949	1,421	•
Sept.	52,819	14,173	25,204	41,788	1,482	•
Oct.	76,770	2,214	4,131	74,853	1,395	•
Nov.	58,257	1,205	17,288	42,174	1,307	•
Dec.	52,111	17,976	19,817	50,270	1,655	•
1998 Jan.	68,538	2,060	15,343	55,255	1,262	•
Feb.	61,842	1,466	13,118	50,190	1,172	•
March	49,408	13,537	18,729	44,216	1,907	•
April	41,671	15,824	31,769	25,726	2,397	•
May	30,309	3,988	34,350	- 53	2,290	•
June	34,314	14,833	36,186	12,961	2,505	•
July	62,537	2,079	41,120	23,496	2,349	•
Aug.	32,541	15,187	55,102	- 7,374	2,537	•
Sept.	22,859	17,166	50,954	- 10,929	2,687	•
Oct.	40,289	1,809	41,062	1,036	2,223	•
Nov.	34,453	8,233	35,417	7,269	2,375	•
Dec.	34,218	12,407	29,588	17,037	2,912	•

Note: End of period. The annual figures are from the annual accounts of the Nationalbank. The monthly figures (also at end-December) are from the monthly balance sheets. The figures exclude transactions concerning settlement accounts.

¹⁾ Nominal value.

²⁾ Comprises drawings on current account (in the period until end-March 1992) and repurchase agreements (as from April 1992). Until end-1989 also including loans in the money market.

³⁾ Proceeds from established bond-repurchase agreements, which were included in line with general deeds of pledge as security for current-account drawings.

MONEY STOCK

Table 5

Kr. billion	Notes and coin ¹⁾	Deposits with the banks ²⁾			Money stock	Year-on-year increase in money stock
		On demand	At notice	Time deposits ³⁾		
1987	20.4	149.2	45.5	128.7	343.8	3.1
1988	21.9	<u>184.9</u>	42.0	107.7	<u>356.5</u>	3.7
1989	23.1	187.8	37.1	120.0	367.9	1.0
1990	23.6	<u>202.8</u>	<u>42.4</u>	<u>122.2</u>	<u>391.0</u>	6.3
1991	24.2	224.7	36.9	93.1	379.0	4.2
1992	25.0	218.5	33.6	97.6	374.6	- 1.2
1993	25.8	246.4	29.7	114.7	416.6	11.2
1994	28.9	243.4	27.0	94.6	394.0	- 5.4
1995	30.6	251.7	31.8	96.0	410.1	4.1
1996	31.6	278.4	32.8	97.0	439.8	7.2
1997	33.2	295.1	30.8	103.4	462.6	5.2
1997 Jan.	31.4	290.4	33.3	115.2	470.3	7.0
Feb.	31.2	284.2	33.7	110.8	459.9	6.6
March	31.4	273.5	32.5	108.1	445.5	6.1
April	31.6	290.5	32.1	111.7	465.9	2.9
May	32.4	289.6	32.0	107.6	461.6	5.7
June	32.3	284.5	31.8	101.1	449.7	5.2
July	32.2	298.7	32.0	114.9	477.7	6.2
Aug.	32.2	291.8	32.3	105.8	462.2	3.0
Sept.	31.6	290.6	31.6	99.1	452.8	2.9
Oct.	32.5	310.0	32.7	115.3	490.5	4.1
Nov.	32.6	296.4	32.8	102.9	464.7	2.4
Dec.	33.2	295.1	30.9	103.4	462.7	5.2
1998 Jan.	32.7	307.6	31.2	114.1	485.7	3.3
Feb.	31.8	303.6	32.1	105.7	473.2	2.9
March	32.2	300.8	30.9	94.6	458.4	2.9
April	33.4	325.8	31.5	104.3	494.9	6.2
May	33.9	317.4	32.1	103.4	486.7	5.5
June	33.6	312.8	31.2	87.6	465.2	3.5
July	34.1	324.9	31.8	112.4	503.2	5.3
Aug.	33.4	317.4	32.1	107.8	490.7	6.2
Sept.	32.8	315.6	31.1	111.4	490.9	8.4
Oct.	33.5	333.5	31.8	111.3	510.0	4.0
Nov.	33.6	321.1	30.9	98.3	483.9	4.1
Dec.	34.5	317.9	30.5	95.0	477.9	3.3

Note: End of period. On calculation of the rates of increase adjustment is made for breaks in series. Until end-1990 including mortgage-credit institutes' deposits with the banks.

¹⁾ Notes and coin in circulation, excluding the banks' holdings.

²⁾ Accounts with residents in resident units in kroner and foreign exchange. Including Post Giro deposits. Excluding long-term savings schemes, apart from premium-savings accounts.

³⁾ Including bonds, etc. with an original maturity of up to 2 years.

THE NATIONALBANK'S OFFICIAL INTEREST RATES

Table 6

Per cent per annum	Discount rate	Current account deposits ¹⁾	Repurchase agreements and certificates of deposit ²⁾	Per cent per annum	Discount rate	Current account deposits ¹⁾	Repurchase agreements and certificates of deposit ²⁾
1990	8.50	9.50	•	1995 Nov. 9 ...	4.75	4.75	5.15
1991	9.50	9.50	•	- 23 ...	|	|	5.00
1992	9.50	9.50	13.00	Dec. 15 ...	4.25	4.25	4.75
1993	6.25	6.25	6.75	- 28 ...	|	|	4.60
1994	5.00	5.00	5.50	1996 Jan. 11 ...	|	|	4.50
1995	4.25	4.25	4.60	- 25 ...	4.00	4.00	4.35
1996	3.25	3.25	3.50	Feb. 8 ...	|	|	4.25
1997	3.50	3.50	3.75	March 7 ...	3.75	3.75	4.10
1998	3.50	3.50	3.95	- 21 ...	|	|	4.00
1994 Jan. 6	6.00	6.00	6.50	April 1 ...	|	|	3.90
- 19	5.75	5.75	6.25	- 19 ...	3.25	3.25	3.80
Feb. 18	5.50	5.50	6.00	June 6 ...	|	|	3.70
April 15	5.25	5.25	5.90	Aug. 23 ...	|	|	3.50
May 2 ....	|	|	5.80	1997 Oct. 10 ...	3.50	3.50	3.75
- 11 ....	|	|	5.70	1998 May 6 ...	4.00	4.00	4.25
- 13	5.00	5.00	|	- 29 ...	3.75	3.75	4.00
- 19 ....	|	|	5.60	Sept. 21 ...	4.25	4.25	5.00
July 7 ....	|	|	5.50	Oct. 8 ...	|	|	4.75
1995 March 8	6.00	6.00	7.00	- 22 ...	|	|	4.65
April 6 ....	|	|	6.75	Nov. 5 ...	4.00	4.00	4.40
- 27 ....	|	|	6.50	- 26 ...	|	|	4.25
May 18 ....	|	|	6.35	Dec. 4 ...	3.50	3.50	3.95
July 6	5.75	5.75	6.20	1999 Jan. 7 ...	|	|	3.75
- 27 ....	|	|	6.05	Feb. 4 ...	3.25	3.25	3.50
Aug. 3	5.50	5.50	5.90				
- 25	5.00	5.00	5.65				
Sept. 7 ....	|	|	5.50				
- 28 ....	|	|	5.40				
Oct. 5 ....	|	|	5.30				

Note: Interest rates at year-end or as from the date stated.

¹⁾ As from April 1992 until end-April 1997 interest-earning deposits were subject to maximum limits. Until end-March 1992 the banks also had access to drawings on current account. The rate of interest for these drawings was ½ to 1 per cent higher.

²⁾ The Nationalbank's interest rate for repurchase agreements in central-government securities as well as for sale and repurchase of the Nationalbank's certificates of deposit. On purchasing certificates of deposit before expiry the Nationalbank's buy-back price is normally based on a slightly higher interest rate. The interest rates stated exclude this premium.

THE FOREIGN-EXCHANGE RESERVE

Table 7

Kr. million	Stock of gold	Foreign assets	Assets deposited with the European Monetary Institute	Special Drawing Rights (SDR)	Reserve-position in the IMF ¹⁾	Total gross	Foreign liabilities	Total net ²⁾
1988	4,595	59,063	10,454	1,542	2,167	77,821	1,582	76,239
1989	4,340	33,180	4,625	1,850	2,213	46,208	1,304	44,904
1990	3,720	52,707	5,200	1,246	1,807	64,680	1,361	63,319
1991	3,464	38,588	2,814	1,430	2,155	48,451	3,888	44,563
1992	3,456	63,540	2,757	528	2,975	73,256	28,292	44,964
1993	4,339	62,818	4,947	580	2,876	75,560	790	74,770
1994	3,790	44,658	3,460	1,107	2,616	55,631	1,537	54,094
1995	3,531	53,577	4,521	880	3,297	65,806	2,200	63,606
1996	3,652	73,624	4,979	997	3,601	86,853	1,634	85,219
1997	3,331	115,844	4,790	2,291	4,311	130,567	876	129,691
1998	3,934	89,416	-	2,208	7,122	102,680	1,253	101,427
1997 Jan.	3,665	83,190	5,394	997	3,510	96,756	459	96,297
Feb.	3,672	82,274	5,394	1,375	3,485	96,200	465	95,735
March	3,672	81,025	5,394	1,375	3,422	94,888	480	94,408
April	3,665	88,587	5,032	1,372	3,422	102,078	261	101,817
May	3,674	95,066	5,032	1,912	3,422	109,106	269	108,837
June	3,686	96,659	5,032	1,882	3,335	110,594	554	110,040
July	3,677	99,333	4,712	1,944	3,335	113,001	601	112,400
Aug.	3,680	99,377	4,712	1,965	3,335	113,069	815	112,254
Sept.	3,683	105,639	4,712	1,908	3,578	119,520	1,220	118,300
Oct.	3,693	123,675	4,783	1,796	3,578	137,525	1,386	136,139
Nov.	3,712	117,081	4,778	1,529	3,578	130,678	1,880	128,798
Dec.	3,718	114,392	4,778	2,186	4,037	129,111	875	128,236
1998 Jan.	3,416	137,662	4,941	2,205	6,538	154,762	442	154,320
Feb.	3,416	126,240	4,941	2,238	6,538	143,373	568	142,805
March	3,418	123,002	4,941	2,249	6,538	140,148	594	139,554
April	3,387	101,635	5,947	2,231	6,651	119,851	773	119,078
May	3,410	100,456	5,947	2,264	6,651	118,728	866	117,862
June	3,417	100,020	5,947	2,165	7,104	118,653	751	117,902
July	3,434	101,284	5,652	2,189	7,443	120,002	285	119,717
Aug.	3,434	79,268	5,652	1,861	7,443	97,658	6,758	90,900
Sept.	3,435	84,958	5,652	2,265	7,799	104,109	7,845	96,264
Oct.	3,487	79,810	5,593	2,215	7,799	98,904	1,347	97,557
Nov.	3,504	84,982	5,593	1,613	7,759	103,451	1,564	101,887
Dec.	4,320	87,835	44	2,250	7,318	101,767	1,254	100,513

Note: End of period. The annual figures are from the annual accounts of Danmarks Nationalbank. The monthly figures (also at end-December) are from the monthly balance sheets.

¹⁾ Denmark's quota (latest raise in January 1999 to SDR 1,643 million) less IMF holdings of Danish kroner. Value adjustment on the basis of the SDR rate at the time of compilation.

²⁾ As a result of exchange-rate adjustments the foreign-exchange reserve increased by kr.3,178 million in 1988, declined by kr.3,675 million in 1989, by kr.3,147 million in 1990, increased by kr.2,082 million in 1991, by kr.1,529 million in 1992, by kr.4,965 million in 1993, declined by kr.7,715 million in 1994, by kr.3,841 million in 1995, increased by kr.765 million in 1996, by kr.1,454 million in 1997, and by kr.913 million in 1998.

PRINCIPAL ITEMS OF THE BALANCE OF PAYMENTS (NET REVENUES) 1988-96

Table 8a

Kr. billion	Goods (fob)	Travel	Other services	EU	Interest, dividends, etc.	Unrequited transfers	Total current account
1988	12.6	- 4.8	12.9	3.0	- 28.2	- 4.5	- 8.9
1989	17.6	- 4.5	11.4	2.1	- 31.6	- 3.2	- 8.2
1990	30.0	- 2.2	18.1	3.3	- 35.2	- 5.9	8.2
1991	30.3	0.6	24.1	1.8	- 36.5	- 7.4	13.0
1992	41.9	0.4	21.5	1.9	- 34.0	- 7.2	24.5
1993	49.2	- 0.6	16.1	3.8	- 30.4	- 7.8	30.4
1994	45.6	- 1.9	10.9	1.6	- 30.7	- 8.5	17.0
1995	36.6	- 3.4	12.2	2.1	- 27.0	- 9.6	10.8
1996	43.7	- 4.2	14.2	0.6	- 26.8	- 9.8	17.7

Source: Statistics Denmark.

PRINCIPAL ITEMS OF THE BALANCE OF PAYMENTS (NET REVENUES) 1997-98

Table 8b

Kr. billion	Goods (fob)	Services	Goods and services	Wages and property income	Current transfers	Total current account
1997	35.5	0.7	36.2	- 21.1	- 8.9	6.1
1997 Jan.	1.6	- 0.2	1.4	0.0	2.1	3.4
Feb.	3.2	- 0.6	2.5	- 0.6	0.2	2.1
March	3.6	- 0.9	2.7	- 3.7	- 0.8	- 1.8
April	3.1	0.2	3.3	- 1.9	- 0.3	1.1
May	3.7	0.3	4.0	- 1.5	- 1.4	1.1
June	2.0	0.0	2.0	- 0.5	- 1.2	0.3
July	3.3	0.0	3.3	0.2	- 1.9	1.6
Aug.	4.0	- 0.1	3.9	- 1.4	- 0.2	2.2
Sept.	2.4	0.3	2.7	0.1	- 1.4	1.4
Oct.	2.8	0.4	3.3	- 1.0	- 1.0	1.3
Nov.	3.2	0.5	3.7	- 7.4	- 1.5	- 5.2
Dec.	2.7	0.8	3.5	- 3.4	- 1.5	- 1.4
1998 Jan.	1.0	- 1.3	- 0.3	- 1.0	1.0	- 0.3
Feb.	1.7	- 0.5	1.2	- 0.7	- 0.5	0.0
March	1.4	0.2	1.6	- 4.2	- 0.3	- 3.0
April	0.3	- 0.5	- 0.2	- 3.0	- 0.8	- 4.0
May	0.1	- 0.8	- 0.7	0.1	- 0.8	- 1.4
June	2.9	- 0.4	2.6	- 1.9	- 1.5	- 0.8
July	3.1	0.4	3.4	- 1.6	- 0.1	1.7
Aug.	2.0	0.9	2.9	0.2	- 1.3	1.8
Sept.	2.3	0.0	2.3	0.2	- 1.7	0.8
Oct.	1.7	- 0.4	1.3	- 2.3	- 1.6	- 2.6
Nov.	2.0	- 0.5	1.6	- 7.0	- 1.2	- 6.6
Dec. ....	...	...	...	...	...	...

Source: Statistics Denmark.

Note.: As from 1997 the compilation of the balance of payment is in accordance with IMF's 5th Balance of Payments Manual and therefore balance of payment figures before 1997 are not fully comparable with figures of 1997 and onwards.

DENMARK'S FOREIGN ASSETS AND LIABILITIES

Table 9

Kr. billion	Public sector		Private sector		Public and private sectors, total	The National-bank	Total
	The central government	Other public sector	The banks	Other private sector			
Assets							
1991	16	1	291	271	579	49	628
1992	17	4	290	292	603	73	676
1993	16	4	392	298	710	76	786
1994	17	6	310	310	642	56	698
1995	14	9	318	311	651	66	717
1996	13	15	377	399	803	87	890
1997	13	22	451	481	967	131	1,098
1998	13	28	497	587	1,125	103	1,228
Liabilities							
1991	223	18	289	426	956	4	960
1992	290	18	236	416	960	28	988
1993	442	14	192	428	1,076	1	1,077
1994	299	19	193	444	955	2	957
1995	331	16	195	440	981	2	983
1996	368	16	260	498	1,141	2	1,143
1997	398	14	383	570	1,365	1	1,366
1998	384	14	433	675	1,507	1	1,508
Net liabilities							
1991	207	17	- 2	155	377	- 45	332
1992	273	14	- 54	124	557	- 45	312
1993	426	10	- 200	130	366	- 75	291
1994	282	13	- 117	134	313	- 54	259
1995	317	7	- 123	129	330	- 64	266
1996	355	1	- 117	99	338	- 85	253
1997	385	- 8	- 68	89	398	- 130	268
1998	371	- 14	- 64	88	382	- 101	280

Note: End of period. The statistics for 1991, 1994 and 1996 are based on questionnaire surveys, whereas the figures for 1992, 1993, 1995, 1997 and 1998 have been calculated on the basis of the external payments statistics and value adjustments. A current-account deficit of kr.16 billion has been used as the calculation basis for 1998.

DENMARK'S ACCOUNT WITH THE INTERNATIONAL MONETARY FUND

Table 10

End of period	Denmark's quota in the Fund		The Fund's holdings of Danish kroner		Denmark's reserve position in the Fund ¹⁾		Allocated SDR (accumulated)		Denmark's holdings of SDR	
	SDR million	Kr. million	SDR million	Kr. million	SDR million	Kr. million	SDR million	Kr. million	SDR million	Kr. million
1988	711	6,566	476	4,399	235	2,167	179	1,652	167	1,542
1989	711	6,173	456	3,960	255	2,213	179	1,553	213	1,850
1990	711	5,844	491	4,037	220	1,807	179	1,470	152	1,246
1991	711	6,018	456	3,863	255	2,155	179	1,514	169	1,430
1992	1,070	9,208	724	6,233	346	2,975	179	1,539	61	528
1993	1,070	9,953	761	7,077	309	2,876	179	1,664	62	580
1994	1,070	9,502	775	6,886	295	2,616	179	1,589	125	1,107
1995	1,070	8,818	670	5,521	400	3,297	179	1,474	107	880
1996	1,070	9,134	648	5,533	422	3,601	179	1,527	117	997
1997	1,070	9,856	602	5,545	468	4,311	179	1,648	249	2,291
1998	1,070	9,605	277	2,483	793	7,122	179	1,606	246	2,208

Note: Conversion from SDR to Danish kroner is made at the year-end SDR-rate.

¹⁾ Denmark's reserve position in the IMF is determined as the difference between the quota and the Fund's holdings of Danish kroner.

REALIGNMENT PERCENTAGES IN THE EUROPEAN MONETARY SYSTEM (EMS)¹⁾

Table 11

With effect from	D-marks (DEM)	French francs (FRF)	Dutch guilders (NLG)	Belgian francs (BEF)	Italian lire (ITL)	Irish pounds (IEP)
1979 Sept. 24	+ 5.0	+ 3.0	+ 3.0	+ 3.0	+ 3.0	+ 3.0
Nov. 30	+ 5.0	+ 5.0	+ 5.0	+ 5.0	+ 5.0	+ 5.0
1981 March 23	—	—	—	—	- 6.0	—
Oct. 5	+ 5.5	- 3.0	+ 5.5	—	- 3.0	—
1982 Feb. 22	—	—	—	- 8.5	—	—
June 14	+ 4.25	- 5.75	+ 4.25	—	- 2.75	—
1983 March 21 ²⁾	+ 5.5	- 2.5	+ 3.5	+ 1.5	- 2.5	- 3.5
1985 July 22	+ 2.0	+ 2.0	+ 2.0	+ 2.0	- 6.0	+ 2.0
1986 April 7	+ 3.0	- 3.0	+ 3.0	+ 1.0	—	—
Aug. 4	—	—	—	—	—	- 8.0
1987 Jan. 12	+ 3.0	—	+ 3.0	+ 2.0	—	—
1990 Jan. 8	—	—	—	—	³⁾	—
1992 Sept. 14	+ 3.5	+ 3.5	+ 3.5	+ 3.5	- 3.5	+ 3.5
Sept. 17	—	—	—	—	•	—
Nov. 23	—	—	—	—	•	—
1993 Feb. 1	—	—	—	—	•	- 10.0
May 14	—	—	—	—	•	—
1995 March 6	—	—	—	—	•	—
1998 March 16	—	—	—	—	—	+ 3.0

Note.: The European Monetary System (EMS) was established on 13 March 1979 and was abolished on 1 January 1999 on the adoption of the euro by 11 EU member states.

¹⁾ Corresponding to the official wording of the press communiqués issued.

²⁾ As the sterling rate rose strongly after the realignment on 21 March 1983, it was decided in May 1983 to carry out a formal EMS realignment designed to place sterling in the ECU at the market rate of 13 May 1983 at the same time as the agricultural price agreement. Bilateral parities and intervention rates remained unchanged.

³⁾ On 8 January 1990 the fluctuation band for the Italian lira, was reduced from +/-6 per cent to +/-2¼ per cent around the bilateral central rates. In connection with the narrowing of the fluctuation band the intervention rates for the lira vis-à-vis the other ERM currencies were adjusted. The adjustment was made so that the lower limit for the lira vis-à-vis the other currencies remained unchanged whereas the upper limit was adjusted.

REALIGNMENT PERCENTAGES IN THE EUROPEAN MONETARY SYSTEM (EMS)¹⁾

Table 11

Spanish pesetas (ESP)	Pounds sterling (GBP)	Portuguese escudos (PTE)	Austrian schillings (ATS)	Finnish markka (FIM)	Greek drachmas (GRD)	Danish kroner (DKK)	With effect from
•	•	•	•	•	•	–	..... 1979 Sept. 24
•	•	•	•	•	•	–	..... Nov. 30
•	•	•	•	•	•	–	..... 1981 March 23
•	•	•	•	•	•	–	..... Oct. 5
•	•	•	•	•	•	- 3.0	..... 1982 Feb. 22
•	•	•	•	•	•	–	..... June 14
•	•	•	•	•	•	+ 2.5	..... 1983 March 21 ²⁾
•	•	•	•	•	•	+ 2.0	..... 1985 July 22
•	•	•	•	•	•	+ 1.0	..... 1986 April 7
•	•	•	•	•	•	–	..... Aug. 4
•	•	•	•	•	•	–	..... 1987 Jan. 12
–	•	•	•	•	•	–	..... 1990 Jan. 8
+ 3.5	+ 3.5	+ 3.5	•	•	•	+ 3.5	..... 1992 Sept. 14
- 5.0	•	–	•	•	•	–	..... Sept. 17
- 6.0	•	- 6.0	•	•	•	–	..... Nov. 23
–	•	–	•	•	•	–	..... 1993 Feb. 1
- 8.0	•	- 6.5	•	•	•	–	..... May 14
- 7.0	•	- 3.5	–	•	•	–	..... 1995 March 6
–	•	–	–	–	–	–	..... 1998 March 16

CENTRAL RATES IN THE EUROPEAN MONETARY SYSTEM (EMS)

Table 12

With effect from	D-marks (DEM)	French francs (FRF)	Dutch guilders (NLG)	Belgian francs (BEF)	Italian lire (ITL)	Irish pounds (IEP)
1979 March 13	282.237	122.207	260.439	17.9581	0.617160	1,069.35
Sept. 24	296.348	125.801	268.098	18.4862	0.635312	1,100.81
Nov. 30	311.165	132.091	281.503	19.4105	0.667078	1,155.84
1981 March 23	–	–	–	–	0.627052	–
Oct. 5	328.279	128.128	296.986	–	0.608240	–
1982 Feb. 22	338.433	132.090	306.171	18.3098	0.627050	1,191.59
June 14	352.817	124.496	319.183	–	0.609804	–
1983 March 21 ¹⁾	363.141	118.423	322.297	18.1312	0.580057	1,121.84
1985 July 22	–	–	–	–	0.534563	–
1986 April 7	370.332	113.732	328.676	–	0.529268	1,110.72
Aug. 4	–	–	–	–	–	1,021.86
1987 Jan. 12	381.443	–	338.537	18.4938	–	–
1989 June 19 ²⁾	–	–	–	–	–	–
1990 Jan. 8	–	–	–	–	0.509803	–
Oct. 8 ²⁾	–	–	–	–	–	–
1992 April 6 ²⁾	–	–	–	–	–	–
Sept. 14	–	–	–	–	0.475325	–
Sept. 17 ³⁾	–	–	–	–	•	–
Nov. 23	–	–	–	–	•	–
1993 Feb. 1	–	–	–	–	•	919.676
May 14	–	–	–	–	•	–
Aug. 2 ⁴⁾	–	–	–	–	•	–
1995 Jan. 9	–	–	–	–	•	–
March 6	–	–	–	–	•	–
1996 Oct. 14	–	–	–	–	•	–
Nov. 25	–	–	–	–	0.385294	–
1998 March 16	–	–	–	–	–	947.269
Total adjustment in the period, per cent ...	+ 35.15	- 6.93	+ 29.99	+ 2.98	- 37.6	- 11.42

Note: The European Monetary System (EMS) was established on 13 March 1979 and was abolished on 1 January 1999 on the adoption of the euro by 11 EU member states.

¹⁾ As the sterling rate rose strongly after the realignment on 21 March 1983, it was decided in May 1983 to carry out a formal EMS realignment designed to place sterling in the ECU at the market rate of 13 May 1983 at the same time as the agricultural price agreement. Bilateral parities and intervention rates remained unchanged.

²⁾ Spain, the UK and Portugal joined the ERM with a fluctuation band of +/- 6 per cent. The other bilateral parities and intervention rates remained unchanged.

³⁾ The intervention obligation for the pound sterling and the Italian lira was suspended and the intervention rates for the Spanish peseta was written down by 5 per cent.

⁴⁾ The central rates remained unchanged, but the fluctuation margins for all currencies were increased to +/- 15 per cent. (However, the German and Dutch authorities agreed that the previous intervention rates between the D-mark and the Dutch guilder should continue to apply.)

CENTRAL RATES IN THE EUROPEAN MONETARY SYSTEM (EMS)

Table 12

Spanish pesetas (ESP)	Pounds sterling (GBP)	Portuguese escudos (PTE)	Austrian schillings (ATS)	Finnish markka (FIM)	Greek drachmas (GRD)	With effect from
•	•	•	•	•	•	..... 1979 March 13
•	•	•	•	•	•	..... Sept. 24
•	•	•	•	•	•	..... Nov. 30
•	•	•	•	•	•	..... 1981 March 23
•	•	•	•	•	•	..... Oct. 5
•	•	•	•	•	•	..... 1982 Feb. 22
•	•	•	•	•	•	..... June 14
•	•	•	•	•	•	..... 1983 March 21 ¹⁾
•	•	•	•	•	•	..... 1985 July 22
•	•	•	•	•	•	..... 1986 April 7
•	•	•	•	•	•	..... Aug. 4
•	•	•	•	•	•	..... 1987 Jan. 12
5.86837	•	•	•	•	•	..... 1989 June 19 ²⁾
–	•	•	•	•	•	..... 1990 Jan. 8
–	1,125.26	•	•	•	•	..... Oct. 8 ²⁾
–	–	4.38747	•	•	•	..... 1992 April 6 ²⁾
–	–	–	•	•	•	..... Sept. 14
5.57496	•	–	•	•	•	..... Sept. 17 ³⁾
5.24047	•	4.12423	•	•	•	..... Nov. 23
–	•	–	•	•	•	..... 1993 Feb. 1
4.82126	•	3.85618	•	•	•	..... May 14
–	•	–	•	•	•	..... Aug. 2 ⁴⁾
–	•	–	54.2170	•	•	..... 1995 Jan. 9
4.48376	•	3.72119	–	•	•	..... March 6
–	•	–	–	125.474	•	..... 1996 Oct. 14
–	•	–	–	–	•	..... Nov. 25
–	•	–	–	–	2.11276	..... 1998 March 16
– 23.59	–	– 15.19	–	–	–	Total adjustment in the period, per cent

INTERVENTION RATES WITHIN THE EMS 1979-98

Table 13

Danish kroner per 100 units	D-marks (DEM)	French francs (FRF)	Dutch guilders (NLG)	Belgian francs (BEF)	Italian lire (ITL)	Irish pounds (IEP)
1979 March 13	288.660	124.985	266.365	18.3665	0.65530	1,093.65
	275.960	119.490	254.645	17.5585	0.58130	1,045.55
Sept. 24	303.090	128.660	274.195	18.9065	0.67450	1,125.85
	289.760	123.000	262.140	18.0750	0.59840	1,076.35
Nov. 30	318.260	135.095	287.900	19.8520	0.70830	1,182.14
	304.230	129.150	275.245	18.9785	0.62825	1,130.13
1981 March 23	318.260	135.095	287.900	19.8520	0.66580	1,182.14
	304.230	129.150	275.245	18.9785	0.59056	1,130.13
Oct. 5	335.740	131.040	303.740	19.8520	0.64580	1,182.14
	320.980	125.280	290.380	18.9785	0.57285	1,130.13
1982 Feb. 22	346.130	135.090	313.140	18.7260	0.66580	1,218.70
	330.910	129.160	299.360	17.9030	0.59056	1,165.09
June 14	360.830	127.330	326.450	18.7260	0.64750	1,218.70
	344.970	121.730	312.080	17.9030	0.57430	1,165.09
1983 March 21	371.400	121.110	329.630	18.5430	0.61590	1,147.35
	355.060	115.780	315.130	17.7270	0.54630	1,096.87
1985 July 22	371.400	121.110	329.630	18.5430	0.56760	1,147.35
	355.060	115.780	315.130	17.7270	0.50350	1,096.87
1986 April 7	378.760	116.320	336.160	18.5430	0.56200	1,135.99
	362.090	111.200	321.360	17.7270	0.49850	1,086.01
Aug. 4	378.760	116.320	336.160	18.5430	0.56200	1,045.11
	362.090	111.200	321.360	17.7270	0.49850	999.13
1987 Jan. 12	390.160	116.320	346.240	18.9143	0.56200	1,045.11
	373.000	111.200	331.020	18.0831	0.49850	999.13
1989 June 19	390.160	116.320	346.240	18.9143	0.56200	1,045.11
	373.000	111.200	331.020	18.0831	0.49850	999.13

Note: The rates listed are those at which Danmarks Nationalbank is under an obligation to sell and buy the respective currencies.

INTERVENTION RATES WITHIN THE EMS 1979-98

Table 13

Spanish pesetas (ESP)	Pounds sterling (GBP)	Portuguese escudos (PTE)	Austrian schillings (ATS)	Finnish markka (FIM)	Greek drachmas (GRD)	Danish kroner per 100 units
•	•	•	•	•	•	..... 1979 March 13
•	•	•	•	•	•	..... Sept. 24
•	•	•	•	•	•	..... Nov. 30
•	•	•	•	•	•	..... 1981 March 23
•	•	•	•	•	•	..... Oct. 5
•	•	•	•	•	•	..... 1982 Feb. 22
•	•	•	•	•	•	..... June 14
•	•	•	•	•	•	..... 1983 March 21
•	•	•	•	•	•	..... 1985 July 22
•	•	•	•	•	•	..... 1986 April 7
•	•	•	•	•	•	..... Aug. 4
•	•	•	•	•	•	..... 1987 Jan. 12
•	•	•	•	•	•	..... 1989 June 19
6.231	•	•	•	•	•	
5.526	•	•	•	•	•	

INTERVENTIONS RATES WITHIN THE EMS 1979-98

Table 13

Danish kroner per 100 units			D-marks (DEM)	French francs (FRF)	Dutch guilders (NLG)	Belgian francs (BEF)	Italian lire (ITL)	Irish pounds (IEP)
1990	Jan.	8	390.160	116.320	346.240	18.9143	0.52140	1,045.11
			373.000	111.200	331.020	18.0831	0.49850	999.13
	Oct.	8	390.160	116.320	346.240	18.9143	0.52140	1,045.11
			373.000	111.200	331.020	18.0831	0.49850	999.13
1992	April	6	390.160	116.320	346.240	18.9143	0.52140	1,045.11
			373.000	111.200	331.020	18.0831	0.49850	999.13
	Sept.	14	390.160	116.320	346.240	18.9143	0.48614	1,045.11
			373.000	111.200	331.020	18.0831	0.46475	999.13
	Sept.	17	390.160	116.320	346.240	18.9143	•	1,045.11
			373.000	111.200	331.020	18.0831	•	999.13
	Nov.	23	390.160	116.320	346.240	18.9143	•	1,045.11
			373.000	111.200	331.020	18.0831	•	999.13
1993	Feb.	1	390.160	116.320	346.240	18.9143	•	940.60
			373.000	111.200	331.020	18.0831	•	899.22
	May	14	390.160	116.320	346.240	18.9143	•	940.60
			373.000	111.200	331.020	18.0831	•	899.22
	Aug.	2	442.968	132.066	393.105	21.4747	•	1,067.92
			328.461	97.943	291.544	15.9266	•	792.014
1995	Jan	9	442.968	132.066	393.105	21.4747	•	1,067.92
			328.461	97.943	291.544	15.9266	•	792.014
	March	6	442.968	132.066	393.105	21.4747	•	1,067.92
			328.461	97.943	291.544	15.9266	•	792.014
1996	Oct.	14	442.968	132.066	393.105	21.4747	•	1,067.92
			328.461	97.943	291.544	15.9266	•	792.014
	Nov.	25	442.968	132.066	393.105	21.4747	0.44740	1,067.92
			328.461	97.943	291.544	15.9266	0.33181	792.014
1998	March	16	442.968	132.066	393.105	21.4747	0.44740	1,099.950
			328.461	97.943	291.544	15.9266	0.33181	815.774

Note: The rates listed are those at which Danmarks Nationalbank is under an obligation to sell and to buy the respective currencies.

INTERVENTIONS RATES WITHIN THE EMS 1979-98

Table 13

Spanish pesetas (ESP)	Pounds sterling (GBP)	Portuguese escudos (PTE)	Austrian schillings (ATS)	Finnish markka (FIM)	Greek drachmas (GRD)		Danish kroner per 100 units
6.231	•	•	•	•	•	.....	1990 Jan. 8
5.526	•	•	•	•	•		
6.231	1,194.79	•	•	•	•	.....	Oct. 8
5.526	1,059.76	•	•	•	•		
6.231	1,194.79	4.6586	•	•	•	.....	1992 April 6
5.526	1,059.76	4.1321	•	•	•		
6.231	1,194.79	4.6586	•	•	•	.....	Sept. 14
5.526	1,059.76	4.1321	•	•	•		
5.9196	•	4.6586	•	•	•	.....	Sept. 17
5.2504	•	4.1321	•	•	•		
5.5645	•	4.3791	•	•	•	.....	Nov. 23
4.9354	•	3.8842	•	•	•		
5.5645	•	4.3791	•	•	•	.....	1993 Feb. 1
4.9354	•	3.8842	•	•	•		
5.1193	•	4.0945	•	•	•	.....	May 14
4.5407	•	3.6317	•	•	•		
5.5985	•	4.4770	•	•	•	.....	Aug. 2
4.1519	•	3.3209	•	•	•		
5.5985	•	4.4777	62.9561	•	•	.....	1995 Jan. 9
4.1519	•	3.3209	46.6910	•	•		
5.2064	•	4.3210	62.9561	•	•	.....	March 6
3.8614	•	3.2046	46.6910	•	•		
5.2064	•	4.3210	62.9561	145.699	•	.....	1996 Oct. 14
3.8614	•	3.2046	46.6910	108.057	•		
5.2064	•	4.3210	62.9561	145.699	•	.....	Nov. 25
3.8614	•	3.2046	46.6910	108.057	•		
5.2064	•	4.3210	62.9561	145.699	2.45331	.....	1998 March 16
3.8614	•	3.2046	46.6910	108.057	1.81948		

EXCHANGE RATES

Table 14

Danish kroner per 100 units	US-dollars (USD)	Pounds sterling (GBP)	D-marks (DEM)	Swedish kronor (SEK)	Norwegian kroner (NOK)	French francs (FRF)	Belgian francs (BEF)	Swiss francs (CHF)	Dutch guilders (NLG)	Italian lire (ITL)	Finnish markka (FIM)
1989	731.51	1,197.53	388.84	113.40	105.87	114.61	18.559	447.24	344.72	0.5330	170.46
1990	618.53	1,102.04	382.89	104.50	98.85	113.65	18.523	446.16	339.84	0.5163	161.89
1991	640.34	1,128.13	385.67	105.72	98.64	113.41	18.734	446.30	342.26	0.5158	158.32
1992	602.73	1,062.91	386.53	103.94	97.15	114.02	18.775	429.85	343.29	0.4911	135.08
1993	649.45	974.42	392.31	83.33	91.38	114.47	18.760	439.43	349.23	0.4126	113.54
1994	635.23	972.32	391.94	82.32	90.07	114.59	19.020	465.26	349.50	0.3939	121.96
1995	560.53	884.61	391.13	78.65	88.45	112.30	19.010	474.22	349.17	0.3444	128.39
1996	579.59	905.17	385.42	86.47	89.79	113.34	18.728	469.65	343.95	0.3758	126.31
1997	660.86	1,082.32	380.96	86.54	93.36	113.17	18.463	455.35	338.51	0.3879	127.27
1998	669.70	1,109.36	380.84	84.23	88.70	113.60	18.462	462.37	337.86	0.3858	125.36
1997 Jan...	611.71	1,015.62	381.38	86.71	94.86	113.01	18.500	439.65	339.63	0.3904	128.23
Feb...	638.25	1,037.69	381.41	86.23	96.31	112.97	18.485	439.50	339.56	0.3858	128.32
March	647.60	1,038.89	381.48	84.52	94.93	113.08	18.490	441.79	338.97	0.3819	127.60
April.	651.44	1,061.70	380.95	84.82	93.46	113.11	18.464	445.70	338.75	0.3848	127.04
May..	648.62	1,059.00	380.81	84.46	91.78	112.92	18.450	453.13	338.59	0.3854	126.26
June.	657.42	1,081.21	380.79	84.87	91.14	112.81	18.453	456.10	338.46	0.3879	127.10
July..	682.04	1,139.99	380.85	87.33	91.64	112.88	18.449	460.52	338.24	0.3911	128.50
Aug..	701.77	1,125.18	380.95	87.79	91.97	113.03	18.449	463.39	338.22	0.3900	127.40
Sept.	681.36	1,089.99	380.75	88.42	93.07	113.26	18.445	462.62	338.07	0.3901	127.20
Oct...	669.02	1,091.57	380.77	88.38	94.51	113.50	18.459	460.74	337.97	0.3887	127.02
Nov..	659.45	1,112.61	380.62	87.19	93.41	113.67	18.453	468.58	337.71	0.3885	126.31
Dec...	677.16	1,124.82	380.89	86.96	93.42	113.78	18.462	470.50	337.99	0.3885	126.05
1998 Jan...	691.58	1,130.83	380.89	86.32	92.30	113.74	18.464	469.02	337.98	0.3869	125.84
Feb...	691.32	1,133.14	381.10	85.60	91.49	113.69	18.466	472.10	338.12	0.3862	125.65
March	696.04	1,156.07	381.18	87.36	91.81	113.70	18.478	467.77	338.19	0.3871	125.61
April.	691.66	1,156.27	381.34	88.47	91.86	113.76	18.479	459.38	338.65	0.3860	125.64
May..	676.46	1,109.19	381.07	87.89	90.81	113.64	18.472	457.35	338.17	0.3864	125.39
June.	682.91	1,127.48	380.89	86.31	90.10	113.60	18.465	456.82	337.92	0.3866	125.32
July..	685.01	1,126.27	381.06	85.78	89.86	113.66	18.478	452.61	338.01	0.3865	125.36
Aug..	681.08	1,112.36	380.92	83.82	88.27	113.62	18.472	455.75	337.78	0.3860	125.26
Sept.	648.68	1,089.70	380.87	82.05	85.59	113.59	18.463	462.48	337.64	0.3855	125.13
Oct...	622.81	1,055.39	380.25	79.41	83.78	113.41	18.431	466.00	337.18	0.3844	124.97
Nov..	638.96	1,061.66	380.20	79.95	85.79	113.39	18.431	461.92	337.20	0.3842	125.03
Dec...	634.75	1,060.11	380.44	78.74	83.61	113.44	18.444	467.16	337.57	0.3842	125.14

Note: Yearly and monthly average. Apart from SDRs, the exchange rates listed are fixed on the basis of market rates at 11.30 a.m. Until end-1991 the exchange rates listed are middle rates quoted in Copenhagen. The SDR rate is calculated on the basis of the market rates of the currencies included in the basket.

EXCHANGE RATES

Table 14

Icelandic kroner (ISK)	Austrian schillings (ATS)	Spanish pesetas (ESP)	Por- tuguese escudos (PTE)	Canadian dollars (CAD)	Japanese yen (JPY)	Irish pounds (IEP)	Greek drachmas (GRD)	Austra- lian dollars (AUD)	New Zealand dollars (NZD)	ECUs (XEU)	SDRs (XDR)	Nominal effective kroner rate (1980= 100)
12.92	55.257	6.177	4.645	617.96	5.3079	1,036.38	4.506	...	...	804.55	936.69	90.2
10.65	54.420	6.074	4.341	530.19	4.2846	1,023.56	3.907	...	...	787.37	838.80	96.3
10.87	54.811	6.157	4.429	559.29	4.7604	1,030.27	3.514	...	...	791.55	874.70	94.6
10.47	54.928	5.905	4.471	499.19	4.7606	1,026.49	3.167	443.10	324.29	779.97	848.77	96.9
9.59	55.760	5.102	4.037	503.09	5.8736	949.92	2.828	440.77	351.63	758.19	906.68	99.9
9.08	55.711	4.746	3.831	465.51	6.2171	950.44	2.619	464.62	377.06	752.22	909.23	99.9
8.65	55.596	4.495	3.737	408.39	5.9799	898.54	2.420	415.80	367.64	724.60	849.63	103.9
8.69	54.783	4.578	3.759	425.08	5.3316	927.87	2.409	453.67	398.76	726.24	841.42	102.9
9.31	54.135	4.511	3.769	477.44	5.4761	1,001.55	2.420	490.90	437.20	746.26	909.13	100.0
9.41	54.129	4.486	3.718	452.27	5.1339	953.82	2.270	421.66	359.66	751.37	908.10	101.3
8.96	54.208	4.544	3.815	453.19	5.1906	998.67	2.434	475.68	429.07	740.47	865.81	101.4
9.06	54.198	4.503	3.797	470.97	5.1935	1,013.06	2.434	489.76	441.08	740.47	883.64	100.8
9.11	54.202	4.497	3.796	472.67	5.2859	1,012.24	2.425	510.42	451.76	740.49	891.84	100.9
9.15	54.126	4.512	3.797	467.46	5.1890	1,010.87	2.410	507.36	451.08	743.29	893.62	100.7
9.21	54.106	4.512	3.781	469.89	5.4566	982.27	2.388	502.40	448.56	742.29	898.76	100.6
9.34	54.109	4.507	3.770	474.78	5.7574	991.68	2.403	495.40	451.93	744.15	914.29	99.9
9.59	54.128	4.515	3.772	495.37	5.9222	1,020.92	2.428	506.30	451.80	751.17	939.36	98.5
9.66	54.137	4.509	3.760	505.39	5.9510	1,018.85	2.431	520.20	450.62	749.72	950.24	98.3
9.51	54.104	4.513	3.748	491.23	5.6427	1,008.84	2.415	493.03	433.23	746.95	926.37	99.1
9.36	54.100	4.512	3.739	482.75	5.5296	982.89	2.418	482.57	425.36	748.32	916.48	99.4
9.28	54.080	4.507	3.729	466.91	5.2696	990.71	2.425	458.70	411.71	753.06	906.13	100.1
9.44	54.132	4.504	3.727	474.93	5.2341	986.83	2.422	448.94	401.13	753.65	916.96	100.3
9.51	54.140	4.494	3.724	480.32	5.3445	956.28	2.410	453.59	400.64	752.36	928.95	100.2
9.58	54.164	4.497	3.723	481.92	5.4990	951.55	2.410	466.11	402.94	752.52	933.30	100.1
9.60	54.179	4.496	3.725	491.31	5.3981	952.30	2.283	466.41	398.97	756.00	935.76	99.6
9.61	54.201	4.491	3.722	483.96	5.2391	961.16	2.189	451.04	382.91	755.85	929.02	99.7
9.48	54.155	4.486	3.720	468.30	5.0112	959.17	2.203	426.78	364.54	750.79	908.81	100.7
9.57	54.134	4.487	3.720	466.02	4.8634	959.71	2.244	411.74	348.93	752.56	910.36	101.0
9.57	54.161	4.490	3.725	461.32	4.8704	958.55	2.287	423.45	355.33	752.94	911.77	100.8
9.50	54.137	4.488	3.721	444.41	4.7067	956.21	2.263	401.83	341.66	751.30	903.47	101.7
9.26	54.129	4.485	3.715	426.34	4.8172	953.46	2.215	381.68	327.24	749.09	885.19	102.7
9.09	54.046	4.474	3.708	404.04	5.1604	948.33	2.211	384.93	325.55	749.23	875.44	103.4
9.12	54.039	4.471	3.708	414.97	5.3100	945.47	2.261	405.32	341.06	747.49	889.53	102.6
9.11	54.075	4.471	3.710	411.77	5.4156	944.87	2.265	393.29	332.10	746.66	889.95	102.7

MONTHLY FINANCIAL STATISTICS: CONTENTS

Interest and exchange rates, share price indices

Summary methodology

- Table
- 1 The Nationalbank's official interest rates and inter-bank interest rates
 - 2 Copenhagen Inter-Bank Offered Rates (CIBOR)
 - 3 The banks' average lending and deposit rates
 - 4 Yields on selected bonds, minimum coupon rate and share price indices
 - 5 3-months euro-deposit rates in selected countries
 - 6 Yields on 10-year central government bonds in selected countries
 - 7 Exchange rates
 - 8 Effective krone rate

The Nationalbank's balance sheet

Summary methodology

- 9 The Nationalbank's balance sheet – principal assets and liabilities
- 10 The Nationalbank's domestic lending and holdings of domestic securities broken down by sector
- 11 The foreign-exchange reserve
- 12 The banks' accounts with the Nationalbank
- 13 Factors affecting the banks' net position with the Nationalbank

The banks' balance sheet

Summary methodology

- 14 The banks' balance sheet, assets
- 15 The banks' balance sheet, liabilities
- 16 The banks' domestic lending broken down by sector
- 17 Change in the banks' domestic lending broken down by sector
- 18 Residents' deposits with the banks broken down by sector
- 19 Change in residents' deposits with the banks broken down by sector
- 20 Residents' deposits with the banks broken down by deposit category
- 21 The banks' holdings of securities
- 22 Change in the banks' holdings of securities

Table	23	The banks' external position
	24	Factors affecting the external position of the banks
	25	The banks' external accounts broken down by country
	26	The banks' external accounts broken down by currency
	27	The banks' accounts with residents in currency
	28	The banks' outstanding forward currency contracts and unsettled currency transactions spot
	29	Selected items from the balance sheet of the Danish banks' units abroad, assets
	30	Selected items from the balance sheet of the Danish banks' units abroad, liabilities
	31	The banks' lending from resident units and units abroad
	32	The money stock
	33	Change in the money stock
	34	Factors affecting the money stock

The mortgage-credit institutes' balance sheet

Summary methodology

35	Selected items from the mortgage-credit institutes' balance sheet
36	Mortgage-credit institutes' lending broken down by sector
37	Change in the mortgage-credit institutes' lending, gross
38	Premature redemptions on the mortgage-credit institutes' lending
39	Ordinary instalments on the mortgage-credit institutes' lending
40	Change in the mortgage-credit institutes' lending, net
41	Change in the mortgage-credit institutes' lending, net including adjustment of value to maturity

Money and capital markets

Summary methodology

42	Circulating domestic krone-denominated bonds quoted on the Stock Exchange (nominal values)
43	Gross supply of quoted domestic krone-denominated bonds (nominal values)
44	Net supply of quoted domestic krone-denominated bonds (nominal values)
45	Gross supply of quoted domestic krone-denominated bonds (market value)
46	Net supply of quoted domestic krone-denominated bonds (market value)

- Table 47 Net supply and placing of quoted domestic krone-denominated bonds (market value)
- 48 Net supply and placing of quoted domestic central government securities (market value)
- 49 Share augmentations broken down by industry (market value)
- 50 The banks' lending in the money market

Central-government finance and debt

Summary methodology

- 51 Central government's financing requirement
- 52 Covering of central government's net financing requirement
- 53 Central-government debt
- 54 Central government's gross debt broken down by method of interest payment
- 55 Central government's gross debt broken down by term to maturity
- 56 Central government's gross debt broken down by currency

External payments

Summary methodology

- 57 External payments (1)
- 58 External payments (2)
- 59 Payments regarding goods and services
- 60 Specification of payments regarding services
- 61 Payments regarding interests and dividends plus current transfers
- 62 Capital imports broken down by instrument
- 63 Foreign securities broken down by purchasing sector
- 64 Danish securities broken down by issuing sector
- 65 Other investments (loans and deposits) broken down by sector
- 66 Capital imports broken down by sector
- 67 Specification of portfolio investments in Danish bonds, etc.
- 68 Payments regarding Danish shares and Danish krone-denominated bonds, etc.

Direct investments

Summary methodology

- 69 Direct investments
- 70 Danish transfers of equity capital abroad broken down by industry

- Table 71 Foreign transfers of equity capital to Denmark broken down by industry
- 72 Danish transfers of equity capital abroad broken down by country
- 73 Foreign transfers of equity capital to Denmark broken down by country
- 74 Transfers of loan capital (net) broken down by industry
- 75 Transfers of loan capital (net) broken down by country

**DANISH BANK HOLIDAYS OTHER
THAN SATURDAYS AND SUNDAYS**

New Year's Day
Maundy Thursday
Good Friday
Easter Monday
General Prayer Day (in 1999, April 30)
Ascension Day
Whit Monday
Constitution Day (June 5)
December 24
Christmas Day
Boxing Day
December 31 (from noon only)
(It is under consideration in the EU to make
31 December 1999 a full bank holiday)

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